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ABSTRACT

This study tested a model of inservice education which used small group interaction sessions and individual feedback to assist teachers in continuing their professional development. The competencies (dealing with teacher classroom behavior) used as content during the group sessions were relevant to the experimental population of beginning primary teachers. The individual feedback consisted of classroom observation and conferences with the teachers as they implemented behaviors associated with each competency. This program was conducted during school hours; the teachers who participated were released from their teaching responsibilities for the group sessions. The study followed a pretest--posttest design with two experimental groups and a control group. The students' evaluation indicated their belief that the model was most useful in assisting them in developing and refining teaching competencies. They believed that the program would have been more useful if it had extended for an entire school year or longer, instead of for only one-half a semester. (Author)

THE USE OF INTERACTION AND FEEDBACK IN AN INSERVICE EDUCATION MODEL

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by

Joseph Thomas Hrivnak

B.S. in Ed., Indiana University of Pennsylvania, 1957

M.A., University of Pittsburgh, 1963

Submitted to the Graduate Faculty in the School
of Education in partial fulfillment of
the requirements for the degree of
Doctor of Education

University of Pittsburgh

1970

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CHAPTER I

INSERVICE EDUCATION

A. Introduction

The typical preservice education of teachers is a highly systematized program of experiences over a four or five year period. The participants are closely assisted as they develop behaviors for each competency necessary for initial success in the classroom. However, at the completion of their preservice education, the beginning teachers do not possess the levels of competency development necessary for continued success in the classroom. (O.E., U.S. H.E.W., 1968)

Realizing that they do not possess all skills necessary to become fully-functioning professionals, beginning teachers continue their development in individual ways such as formal college work, travel, and professional reading. (National Education Association, 1966) School districts attempt to fulfill their obligations for the continuing professional development of teachers with one or two "inservice" days during the school year. (National Education Association, 1966, p. 5) Concerning these large group meetings, Flanders states,

> At its worst, inservice training is a gigantic spectator sport for teachers costing at least twenty million dollars annually. As spectators, teachers gather to hear speeches, usually choosing seats in the rear of the room. They play a passive role in which their own ideas and questions are not adequately considered. (Amidon and Hough, 1967, p. 257)

Although school systems are recognizing the need for more comprehensive programs for the continuing development of teachers, inservice education today is still, for the most part, a haphazard, uncoordinated, often impractical individual effort. (Southworth, 1968, p. 6; National Education Association, 1966) Teachers do not receive the inservice education they believe is needed or that will help them improve classroom instruction. (National Education Association, 1968, p. 80)

The nine models of elementary education designed for the United States Office of Education construe preservice and inservice as part of a continuum. (O.E., U.S.H.E.W., 1968) A greater partnership between university and school district to assist teachers continue their professional development must be attained. (Southworth, 1968, p. 8) School systems must be willing to commit resources to the professional development of their faculties and attempt to increase the usefulness and relevance of inservice education to the needs of each teacher on their faculties. (National Education Association, 1966) The need of beginning teachers for assistance is even greater than for experienced teachers because of the additional problems they encounter in adjusting to their changing professional role. (Harris, 1960,

p. 704) They need assistance as they continue developing behaviors associated with competencies begun in preservice education and as they begin developing new competencies.

The impractical aspects of inservice education are evidenced by the study of Cruickshank and Broadbent (1965) in which beginning elementary teachers were asked to list concerns or areas in which assistance was desired. The majority of the teachers listed thirty concerns of major interest to them.

Beginning teachers, as all teachers, need a systematic integrated program that is pragmatic and will assist them in efforts to improve their classroom instruction. They need assistance to bridge the gap from preservice to inservice when they assume responsibility for the learning of children in their classrooms.

B. Purpose of the Study

The general purpose of this study is to design and implement a program of inservice education to offer beginning teachers practical assistance as they continue their professional development. Its specific purpose is to determine if the use of small group interaction and individual feedback to a teacher, as an integral part of his teaching day, will be useful to him.

C. Need for the Study

A model of continuing pragmatic inservice education for beginning teachers would assist in the implementation of change and help them adjust to their changing professional role. (Denemark and Macdonald, 1967, pp. 233-247; O.E., U.S.H.E.W., 1968c, p. 114) A continuing, pragmatic inservice education program model will provide a vehicle for the teacher to use as he develops and reinforces various teaching competencies.

D. The Problem and its Elements

The problem is to determine whether beginning teachers will find useful and practical an inservice education model that includes group interaction sessions, classroom observation, and feedback as they continue their professional development. This problem includes the following elements.

1. Time for professional growth must not be added to already full-time responsibilities.

2. The program must provide useful skills. The teacher must be able to apply his new learning immediately to assist students in his classroom with their learning.

3. The program must be systematic in approach and follow a logical framework or prescribed pattern.

4. The program must help teachers identify competencies that need development and assist teachers in

specific planning for the development of these competencies.

5. The model must be adaptable and useful to teachers with responsibility for a class of pupils in a public elementary school.

6. Though not central to the development of the process model, relevant content must be developed for the teachers to work with as they participate in the inservice education program.

CHAPTER II

RATIONALE FOR PROCESS AND CONTENT

A. Rationale for Model of Inservice Education

The model for the inservice program presented here assumes that inservice education is a regular part of the teaching day and an integral step in the teacher's induction to the profession; therefore, released time from classroom responsibilities should be provided.

The process model (Figure 1) includes a small group interaction session in which behaviors associated with a specific competency and plans for their development in the classroom are described and discussed. To assist the teacher as he develops a particular competency, the professional using the model will observe classroom behavior and feed back to the teacher perceptions of the development. This feedback or discussion will continue until the teacher and professional are satisfied with the teaching progress in the development of the competency. The model provides for additional assistance (broken line) so the teacher may receive continued help in the development of a competency he believes, as a result of feedback received, that he is not realizing successfully.

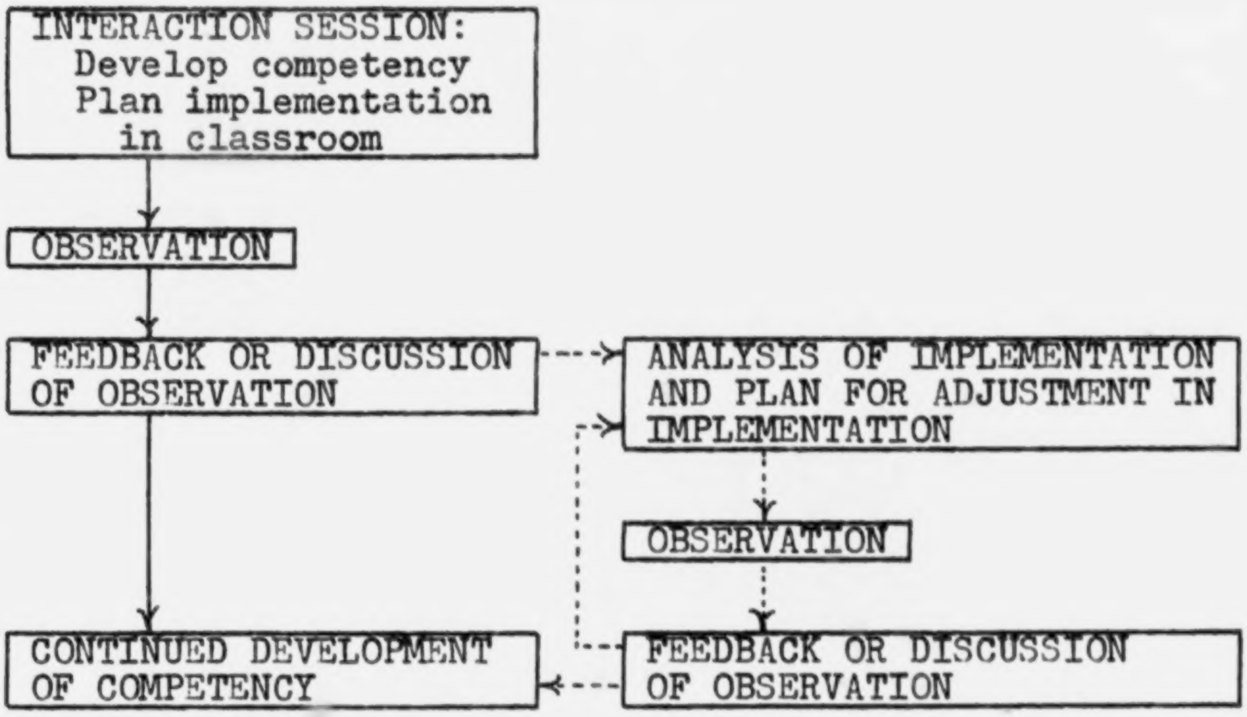
INTERACTION SESSION:
Develop competency
Plan implementation in classroom
OBSERVATION
FEEDBACK OR DISCUSSION OF OBSERVATION
ANALYSIS OF IMPLEMENTATION AND PLAN FOR ADJUSTMENT IN IMPLEMENTATION
OBSERVATION
FEEDBACK OR DISCUSSION OF OBSERVATION
CONTINUED DEVELOPMENT OF COMPETENCY

FIGURE 1

PROCESS MODEL FOR INSERVICE EDUCATION

The small group interaction sessions are perceived by this investigator as a viable means for helping teachers gain a basic understanding of and provide an opportunity to plan for the development of desired classroom competencies. In their study, Bowers and Soar (1961) focused on educating inservice teachers in methods and techniques of effective group membership. Volunteer teachers participated in a summer workshop for college credit. The workshop used small group laboratory sessions with a training group (T-Group) organization and philosophy. To equate motivational factors, members of the control group were given the option of taking a college course of their own selection at no expense. Students' attitudes were measured by the Observation Scale and Record developed by Medley and Mitzel and the Russell

Sage Social Relations test. Teachers' attitudes were measured by Bowers' Teacher Opinion Inventory. Teachers who took part in the study changed significantly in their attitudes toward children. They became more accepting and permissive, and they began using more personal interaction than written materials. The result of the training was to help each teacher realize his potential. A "good" teacher was made a better teacher as a result of the training. The less formal, self-directed groups hold great promise for promoting change and a major task of educational supervisors may be to develop such groups of teachers.

Foreman, Poppen and Frost (1967) used a modified group interaction method, a Case Group (C-Group), as part of an elementary school inservice education program. The Case Group attempted to integrate many of the aims and goals of the discussion, case study, and sensitivity-training group approaches in order to provide a meaningful experience for teachers. The group participating included twenty-one teachers, a speech therapist, and a reading specialist. They were divided into three groups: (1) kindergarten and first grade teachers; (2) second, third, fourth grade teachers, and the two specialists; and (3) fifth and sixth grade teachers. The two specialists were available to join other groups upon invitation when their competencies had relevance to the discussions. The number of members in the three groups ranged from seven to nine. The participants varied in background from several beginning teachers to those possessing advanced degrees and having as much as twenty years of teaching experience. Twenty group members were female, three were male. The three groups met for one hour each on a consecutive basis one morning per week for eight weeks. The C-Group experience was evaluated by the subjective estimates of the participants. No pre-test was given and the post-test consisted of a modification of an anonymous, incomplete sentence blank developed by Seegars and McDonald. The over-all reaction of the three groups of teachers was positive. The participants communicated that: personal involvement had been encouraged by the sharing of ideas and feelings about teaching and school problems, participation had facilitated their professional growth as teachers, the program helped them bridge the gap between educational theory and classroom practice, the program helped them develop systematic observation skills, other participants were experiencing difficulties in their classrooms, the participants learned to use each other as resources, and the program opened the channels of communication among the staff.

When the teacher has planned to modify his classroom behavior and there is no professional assistance to help him implement the change, he must rely on his own ability to discern change and interpret informal feedback from his students concerning the change in classroom behavior. Because of the difficulty in interpreting feedback while behaving in an unfamiliar way, he may revert to his original behavior or use the new behavior less effectively. Therefore, an integral part of this model of inservice education is classroom observation and feedback of perceptions relevant to the development of behaviors associated with each competency.

Belanger (1962) conducted a study based on the concept that teachers who are given information about their teaching may be able to make some changes in classroom behavior. He employed techniques to feed back information about ongoing behaviors and provided assistance to teachers if they wished help in analyzing and changing ongoing behaviors. He believed that feedback to teachers concerning the pupils' beliefs about classroom behavior must be accomplished shortly after the behaviors occur. This was accomplished by having pupils report whether or not they understood the teacher. Push-button switches were placed on each desk and the pupils were directed to press the button and hold it when they did not understand what was occurring in the lesson. They were to release the button when they did understand. A recorder observed a panel of lights and kept a minute-by-minute tally of pupils' switching responses. The switching responses were used as feedback and as a criterion measure of teaching before and after presentation of feedback. A supervisor observed classroom behaviors and kept written records of comments about classroom behaviors and possible strategies for improving the teaching performance.

The study was conducted during the 1961 session of the Harvard-Newton Summer program and involved three student interns. The design included eighteen lessons, each presented by one of the student interns to each of two pupil subgroups. Pupils were randomly assigned to the two subgroups. All interns taught a series of lessons to one of the pupil groups in a fifty-five minute period and presented each lesson for the second time to the other pupil group after an interval of two hours. During the interval, one of six feedback treatments was applied. T-tests were applied to the differences in means of the switching responses before and after the experimental treatments.

In five of the eighteen lessons where statistically significant reductions in switching occurred, the investigator was able to accept the hypothesis that pupils would report more instances of "not understanding" in the instructional periods prior to the teachers' receipt of feedback than in lessons following each of the experimental treatments. In seven other lessons there were differences in the means in the hypothesized direction. The investigator's experimental treatments induced positive changes in twenty-eight per cent of the lessons when changes were defined according to his model of teaching and measured by differences in pupils switching responses. Clinical evidence suggests that through the use of feedback, teachers changed the character of their instructional procedures and that teachers can become aware of feedback possibilities in the classroom when they have been alerted to them.

Seager (1965) designed an inventory on which pupils could record their perceptions of teachers' classroom behavior. Items were selected for inclusion in the inventory from his observations of teaching behavior and from instruments developed by others. He controlled the item selection with seven criteria. The twenty-nine items were grouped in six major areas that he suspected were mutually exclusive. The respondents to the inventory were given four choices as to the degree of improvement they believed was necessary in the behaviors. After a pilot study, Seager conducted a study with a major hypothesis that feedback from the responses to the inventory would influence teachers to improve their teaching performances. The population included eight supervisors and thirteen teaching interns from Harvard University. The interns and supervisors were assigned by coin toss to two experimental groups.

The inventory was administered on a staggered schedule in the classrooms. Everyone (supervisor, intern, pupils) responded to the inventory at the same time. The investigator then prepared statistical summaries and interpretative reports for each intern and supervisor. In Experimental Group I every intern and supervisor received a full report within ten days after the inventory was given. Experimental Group II received no reports until the inventory had been administered the second time six weeks after the initial response. A Control group of supervisors, interns and pupils also responded on the second administration of the inventory. After the second administration of the inventory, reports were sent to all groups in the study. The reports included "relative strengths" and "relative weaknesses" of each intern's work as synthesized from the responses. Also included was a frequency distribution of pupils' responses and the choice of the intern and supervisor. Additional information was placed in some reports as broad suggestions for making improvements in prescribed areas.

For each intern, Seager compared (t-test) the six area scores from the first and second administration of the inventory to determine the significance of the differences. There were ten changes in area scores significant at the .01 level in a two-tailed test of significance. All of the significant changes had occurred in area scores of interns in Experimental Group I. These results offer support of the major hypothesis that feedback derived from responses to items of the inventory would influence teachers to change their classroom behavior.

Gage (1963a) conducted a study in which the experimental group was offered feedback. The first teacher in an alphabetical list of all sixth grade teachers in each school district in Illinois was asked to volunteer for the study. This request took the form of a booklet entitled, "What Do They Expect." The first seven pages were a description of the study and an invitation to participate. The last seventeen pages contained instructions and a questionnaire to be completed. The questionnaire included a twelve-item section asking the teacher for her perception of how her model pupil would describe her on each item. Each pupil was furnished a "pupil opinion booklet." In these booklets, the pupils described their teacher on the same twelve items the teacher had responded to in her questionnaire. The pupils also described "the best teacher you can imagine" on the same items. "The booklets were administered by the teacher according to detailed instructions that insured anonymity of the pupils." (Gage, 1963a, p. 263)

As the booklets were received from the teachers they were randomly placed in control and experimental groups. For teachers in the experimental group, frequency distributions and the median score of the pupils' descriptions of the teacher and "best teacher" were computed. A report with the information placed on a histogram for both sets of data was returned to the experimental teacher within ten days of receipt of the data. Similar reports were compiled for the control group, but were not returned to the teachers until the experiment had been completed. Between one and two months after the experimental teachers received the report, all teachers again filled out the forms and their pupils responded to the pupil opinion booklet.

Gage used an analysis of covariance to adjust the differences in initial ratings. The means of the post feedback ratings of the control and experimental groups were compared. The difference between the two groups was in the hypothesized direction. On ten of the twelve items, (four statistically significant) the experimental group was closer to the pupils' ideal teacher. Teachers who received feedback did seem to change in the direction of pupils' ideals more than did teachers from whom feedback was withheld. The theory offered to explain the results was that there was an imbalance between what the teacher was and what the children wanted the teacher to be. The teacher changed his behavior to approximate his pupils' descriptions of the behavior they desired in a teacher.

To talk with the teacher about specific interactions that have occurred in his classroom, the observer must have been _in the classroom_ to have seen the behavior occur. Videotape can be used if there is an agreement (prior to the taping) between the teacher and professional about what behavior the professional will assist in developing.

This model of inservice education, though designed for beginning teachers, can be used by all teachers in a total inservice education program. (Figure 2) Each division can be associated with approximately a semester of a school year.

Divisions One, Two, Three, and Four of the inservice education program will assist the teacher as he adjusts to his changing professional role during the period of time before tenure is granted. As they gain experience, teachers will be given the _major_ responsibility of planning each division of their inservice education program. Since the inservice education program is an integral part of the school program, time will be provided, at school district expense, for these teachers to continue their inservice development.

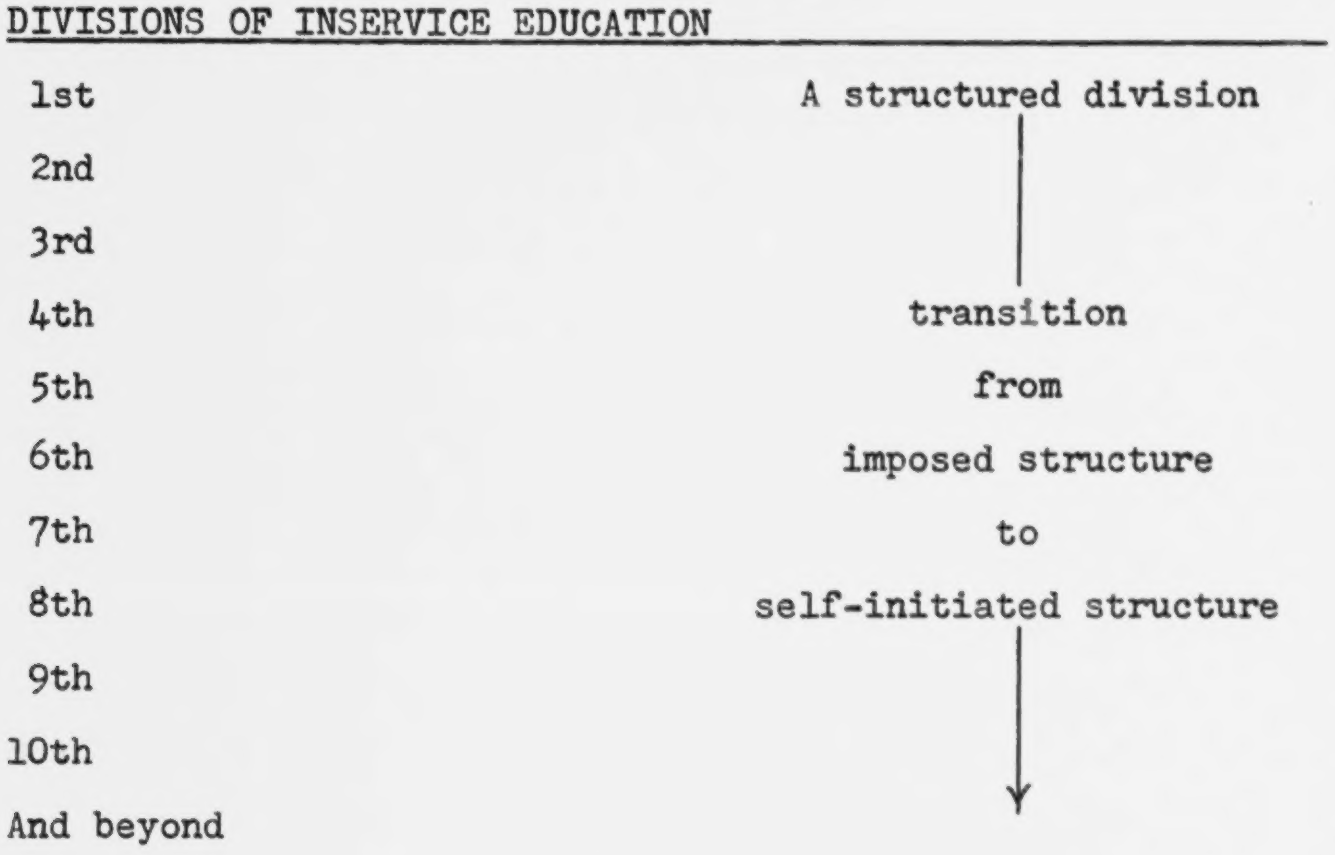
DIVISIONS OF INSERVICE EDUCATION
1st
2nd
3rd
4th
5th
6th
7th
8th
9th
10th
And beyond
A structured division
transition
from
imposed structure
to
self-initiated structure

FIGURE 2

TOTAL INSERVICE EDUCATION PROGRAM

B. Rationale for Content Used in Inservice Education Program

Although the investigator is most concerned about the process model, he realizes that relevant content is also needed. The competencies for Division One were synthesized by the method in Figure 3. Teachers should be permitted freedom in selecting competencies to develop, but the formal evaluation of the model precluded this. The investigator had to synthesize competencies and attendant behaviors so that a formal evaluation could be organized. Also, to move too quickly from a structured program might inhibit teacher response to the program. (Foreman, Poppen and Frost, 1967) If the process model is found to be a viable method of inservice education for beginning teachers, this method and literature will be used to help define the competencies for other divisions of the inservice education program.

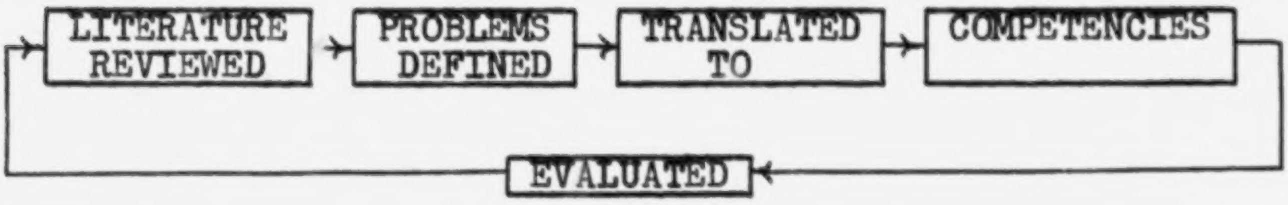

FIGURE 3

METHOD FOR SYNTHESIZING COMPETENCIES

There are no established models of effective teaching-learning behavior. (Gage, 1963b, p. 118) However, researchers have published these findings:

> That a non-directive teacher's class has greater achievement and expanded student initiative and participation than does a directive teacher's class. (Flanders, 1965)
>
> That a guidance-oriented school climate without artifically imposed grade norms tends to produce students with a more realistic concept of their own ability in school-associated tasks. (Miller, 1961)
>
> The aspects of a teacher's personality organization which permit him to be an accepting person, increased his effectiveness in the classroom far beyond chance expectancy. The effective teacher is one whom the students believe trusts them, has confidence in them, seems to teach with ease and a 'sense of humor.' (Reed, 1953)

> That superior elementary teachers more than a randomly selected group of teachers permitted more pupil talk and participation. (Amidon and Giammatteo, 1965)
>
> That a high ability group exposed to indirect teacher influence scored significantly higher on a science test than did a high ability group exposed to direct teacher influence. (Schantz, 1963)

Literature used, in addition to that previously quoted for the development of the competencies, is: Gage's _Handbook of Research on Teaching_, Chapter 10, (Analysis and Investigation of Teaching Methods) particularly pages 452-53, 479, 487-500; Cruickshank and Broadbent's _Identification and Analysis of Problems of First Year Teachers_; Galloway's _Model of Non-Verbal Communication_; Bowers and Soar's _Studies of Human Relations in the Teaching-Learning Process_; and the teacher competencies defined in the University of Pittsburgh, Florida State University, and State Universities of Ohio models of elementary teacher education.

The competencies that have been synthesized by the investigator contribute to the quality of the teacher's assistance to students as they become independent, autonomous learners. The teacher who exhibits these competencies is more likely to assist students than a teacher who does not exhibit these competencies. Possession of the competencies, however, does not _guarantee_ that the teacher will offer assistance, but it does increase the likelihood of the assistance occurring.

The competencies are:

Competency 1: Develop on-task pupil talk and help students verbalize their academic difficulties.

Competency 2: Use students' ideas and have students help in planning some group and individual activities.

Competency 3: Use a wide variety and different levels of academic materials.

Competency 4: Deal with each student's off-task behavior in relation to the individuality of that student.

The teacher who has developed these competencies will exhibit behaviors that encourage student contributions and planning and that acknowledge the individuality of each student by differentiated assignments and materials. Therefore, some aspects of the competency area of assisting students in becoming independent autonomous learners should be developed as the teacher increases his use of these behaviors. A discussion of the placement of this competency area on a continuum of teacher competencies is in Appendix A.

As an example of the investigator's synthesis, the four competencies will assist the beginning teacher with the problems identified by Cruickshank, linguistically modified by the investigator, that are listed along with the competency.

Competency 1: Develop on-task pupil talk and help students verbalize their academic difficulties.

Problems: Involving all children in group discussions
Helping pupils use self-evaluation techniques

Competency 2: Use students' ideas and have students help in planning some group and individual activities.

Problems: Coping with students who finish work early
Helping pupils use self-evaluation techniques
Differentiating instruction among the slow, average and gifted children in class
Providing appropriate work for the class while at the same time working with a small group or individual child

Competency 3: Use a wide variety and different levels of academic materials.

Problems: Motivating students to do homework assignments
Selecting appropriate instructional materials
Differentiating instruction among the slow, average and gifted children in class
Providing appropriate work for the class while at the same time working with a small group or individual child
Finding appropriate reading materials for readers one or more years below grade level
Motivating students to work on class assignments

Competency 4: Deal with each student's off-task behavior in relation to the individuality of that student.

Problems: Handling the constantly disruptive child
Handling children's aggressive behavior toward one another
Helping students see the relationship between undesirable behavior and its consequences
Having children do independent work quietly (Cruickshank and Broadbent, 1965)

The specific materials and treatments used to stimulate discussion and interest in developing each competency are in Appendix C.

CHAPTER III

DESIGN

A. Design of Division One Inservice Education Program

The investigator designed Division One of the inservice education program for this study. The Division (Figure 4) consisted of a series of four applications of the process model (Figure 1).

Each process model provided for the presentation, discussion, and development of behaviors associated with one competency. The process models are not connected because each is a separate entity complete in itself. The competencies developed are related, but not to the degree that this Division must be followed Competency One to Four. Each process model in Division One is independent and can stand alone.

Each application of the process model (Figure 1) took nine working days. This was necessary so the investigator could help each teacher with the development of behaviors associated with each competency. (Figure 5) The observation and discussion with each teacher on days six to nine was adjusted to the individual needs of each teacher for each process model.

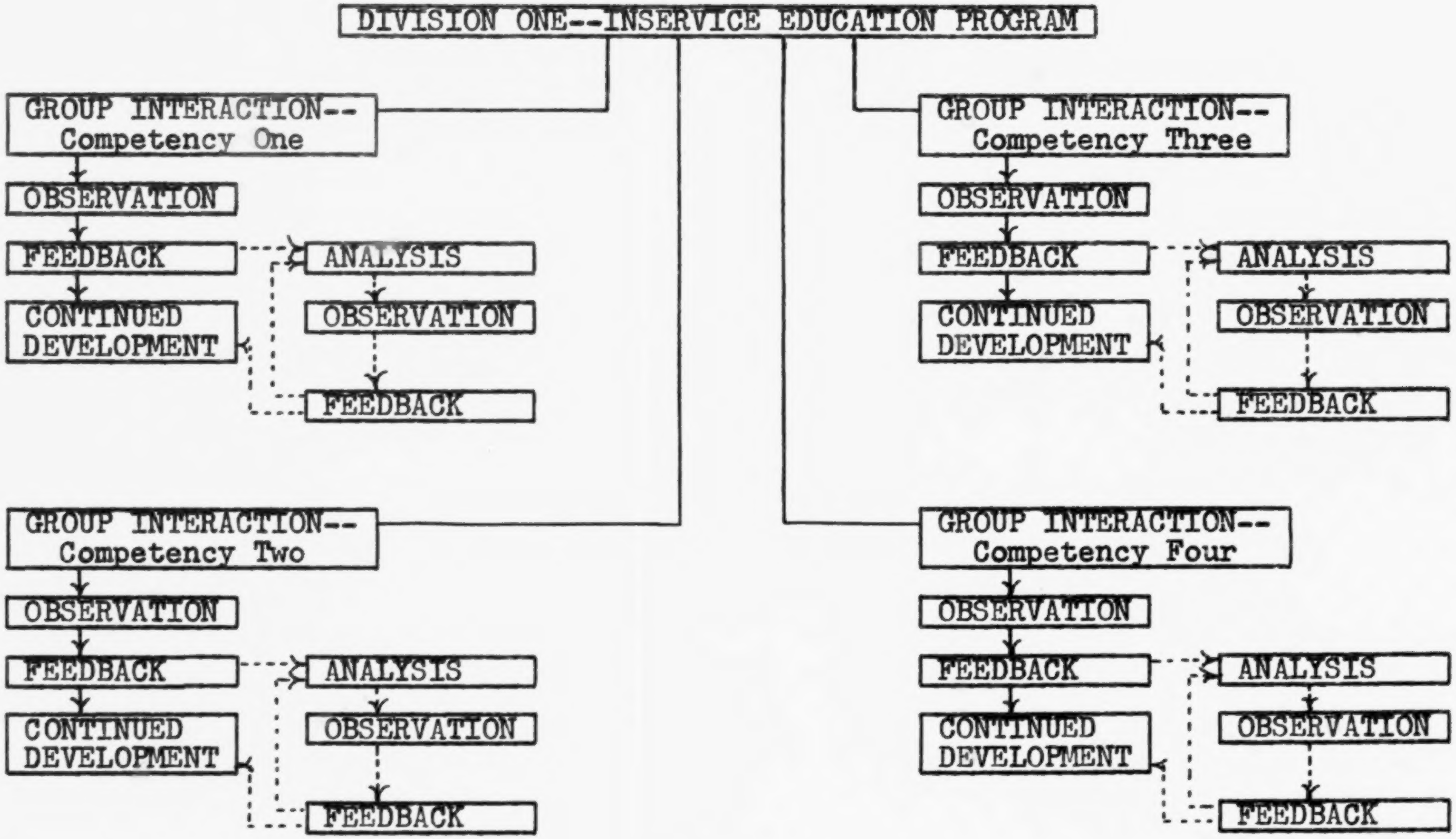
DIVISION ONE--INSERVICE EDUCATION PROGRAM
GROUP INTERACTION--Competency One
OBSERVATION
FEEDBACK
CONTINUED DEVELOPMENT
ANALYSIS
OBSERVATION
FEEDBACK
GROUP INTERACTION--Competency Two
OBSERVATION
FEEDBACK
CONTINUED DEVELOPMENT
ANALYSIS
OBSERVATION
FEEDBACK
GROUP INTERACTION--Competency Three
OBSERVATION
FEEDBACK
CONTINUED DEVELOPMENT
ANALYSIS
OBSERVATION
FEEDBACK
GROUP INTERACTION--Competency Four
OBSERVATION
FEEDBACK
CONTINUED DEVELOPMENT
ANALYSIS
OBSERVATION
FEEDBACK

FIGURE 4

DIVISION ONE--INSERVICE EDUCATION PROGRAM

	TEACHERS IN GROUP A				
DAY NUMBER	A	B	C	D	E
1	0	0	0	0	0
2	*				
3		*	*		
4				*	
5					*
6	*				
7		*	*		
8				*	
9					*

0 = Group Interaction Session
* = Individual Conference

FIGURE 5

LENGTH OF PROCESS MODEL

The competencies selected and the number of teachers involved in any division determines the number of applications of the process model and the length of time for each division. As an example, for Division One the investigator chose, from literature, four competencies that are appropriate for beginning teachers. There were five teachers in Group A and in order to have time available for two observations and discussions with each took a nine-day period to complete one application of the model; therefore, Division One was approximately eight weeks in length for Group A.

B. Design of the Study

The design of this project follows the numerical order listed.

1. Approval for the project was obtained from the University of Pittsburgh, the school district board of education and administration. The system followed to gain approval for using the inservice education model in the school district is outlined in Appendix B. This is included because any program is unlikely to be effectively introduced without an analysis of who must approve the program (formally and informally) so that adequate support will be available for the development of the program.

2. Pilot studies of the Inventory and activities planned for the group sessions were conducted during June, July, and August 1969. The pilot studies are discussed in Appendix C and Appendix F.

3. During July 1969, the investigator met with all beginning primary teachers. He explained the program and asked for volunteers to participate. (The agenda of the meeting is listed in Appendix C--Orientation Meeting.) All beginning primary teachers indicated their desire to participate, but the superintendent of schools would permit only nine teachers to participate. The teachers who volunteered were given a list of five competencies and were asked to select four that they wished to use during the inservice program. (Appendix D) This was done to permit teachers some freedom in selecting what competencies would

be developed. More freedom was not given because of the formal evaluation of the study. The investigator needed to know the behaviors that would be developed so that an inventory measuring these behaviors could be constructed. Also to move too quickly from a structured program might inhibit teacher response to the program. (Foreman, Poppen and Frost, 1967)

4. The teachers were assigned to two groups for the group interaction sessions, with as few teachers as possible moving from the buildings where they teach. Group A participated in the program from September 17 to November 6, 1969, and Group B from November 7, 1969 to January 14, 1970. From September to November 1969, Group B served as a control group. The difference in the starting dates for Group A and Group B did not affect the experimental control since there is no systematic assistance available for continuing the preservice education of beginning teachers in the school district. The teachers in Group B did not receive any systematic assistance prior to their work in this study.

5. The Inventory (Appendix F) was administered in every beginning teacher's classroom and in every control group teacher's classroom September 15, 1969. The control group was randomly selected from a volunteer group of experienced primary teachers. The test administrators were certified teachers selected by the investigator.

6. Group A participated in four applications of the process model (Figure 1) Division I (Figure 4). The group interaction sessions of the process model were held on school time for ninety minutes approximately every two weeks. The content for each of the group interaction sessions is in Appendix C. The investigator kept a journal of the activities in each group interaction session.

7. November 7, 1969, after the fourth application of the process model for Group A, the Inventory was administered in every beginning teacher's classroom and in every control group teacher's classroom.

8. Group B followed the same program outlined in number six for Group A.

9. January 14, 1970, after the fourth application of the process model for Group B, the Inventory was administered in every beginning teacher's classroom and in every control group teacher's classroom.

10. The design of the study follows this pattern:

Group A	$O_1 X O_2 \quad O_3$
Group B	$O_1 \quad O_2 X O_3$
Control Group	$O_1 \quad O_2 \quad O_3$

C. Statement of the Problem

Will a program of inservice education using a process model that includes small group interaction sessions, classroom observation and feedback produce changes in specific teacher behaviors?

D. Hypotheses

1. At the completion of the inservice education program for Group A, the students in this group will perceive a change, measured by the Inventory, in the classroom behavior of each teacher toward the four competencies.

2. At the completion of the inservice education program for Group A, the students in the control groups will not perceive a change, measured by the Inventory, in the classroom behavior of each teacher toward the four competencies.

3. At the completion of the inservice education program for Group B, the students in this group will perceive a change, measured by the Inventory, in the classroom behavior of each teacher toward the four competencies.

4. At the completion of the inservice education program for Group B, the students in the control group will not perceive a change, measured by the Inventory, in the classroom behavior of each teacher toward the four competencies.

5. At the completion of the inservice education program for Group B, the students in Group A will perceive a change, measured by the Inventory, toward the competencies beyond that recorded at the completion of the inservice education program for Group A.

A comparison of the first and third hypotheses with the second and fourth will provide a test of the inservice education process model to assist with the development of behaviors associated with specific competencies. The fifth hypothesis will provide a test of the stability of change in classroom behavior over a period of time.

E. Population

The school system is located in a suburban-rural area, and serves a population of approximately 6000 students of all socio-economic levels. The experimental population consisted of nine, beginning, female primary teachers with two semesters or less of experience. The teachers were assigned to two groups for the interaction sessions, with as few teachers as possible moving from the buildings where they teach. Group A took part in the inservice education program from September to November 1969, with Group B as the control group. From November 1969 to January 1970, Group B took part in the inservice education program.

F. Limitations of the Study

1. The use of a pretest may alert students to teacher behaviors they have not consciously been watching. As they concentrate on these behaviors, they may give a biased perception on the second and third administrations. Researchers have encountered difficulty in interpreting results of a study when they were unsure to what degree the population possessed the tested factors before the treatment was begun. This consideration is more central to the

evaluation of the study than a possible student bias, so a pretest was given.

2. The personal qualities of the investigator and the extent of his ability to use group interaction and individual discussion to bring about change in the behavior of teachers will determine, in part, the outcomes of using the process model.

3. The measurement of the degree of change in classroom behavior will be limited by the sensitivity of the Inventory items in discriminating levels of behavior and the accuracy of the pupil perceptions of the actual classroom behavior.

4. The limitation of one semester will restrict the amount of time each group will have to work on each competency and complete the program.

5. The uncontrolled variables in the context of operating schools may exert an influence upon the students' perceptions.

G. Definition of Terms

Beginning teacher -- a person who holds a certificate to teach (granted by the Pennsylvania Department of Education) and who has two semesters or less of full-time teaching experience

Division -- anything partitioned off or separated; department; compartment; section; segment (Guralnik and Friend, 1968, p. 428)

Feedback -- information provided an individual to assist him develop his perception of an event or series of events

Group interaction session -- a structured meeting to learn, discuss and interact about particular behaviors and to plan for implementation of behaviors as a result of the interaction

Individuality -- the sum of the characteristics or qualities that set one person or thing apart from others; individual character (Guralnik and Friend, 1968, p. 743)

Inservice education -- all efforts of administrative and supervisory officials to promote by appropriate means the professional growth and development of educational workers; illustrative are curriculum study, classroom visitation, and supervisory assistance (Good, 1959, p. 288)

Journal -- a daily record of happenings; a diary; a record of the transactions of a legislature, committee, club, etc. (Guralnik and Friend, 1968, p. 791)

Primary elementary grades -- grades one, two, and three

Rationale -- reasons and reasoning offered in support of the design

CHAPTER IV

EVALUATION

A. Teachers' Evaluation

The teachers evaluated the usefulness of the inservice education program as they continued their development as professionals. They were afforded an opportunity, at the completion of the inservice education program for their group, (Appendix G) to relate to the investigator their beliefs and perceptions of the program. During the evaluative conferences, teachers were permitted complete freedom of response. The investigator questioned only to insure that all teachers evaluated the program totally and covered a common ground of likes, dislikes, recommendations for change, and specific usefulness of the program. They were also given comment sheets (Appendix H) at the beginning of their participation in the program on which they were to record any comments or recommendations for change that they believed would strengthen the program for them.

The teachers were asked to focus their evaluation of and comments about the program on the process model because of the varying degree of relevance the content had for each teacher. From a synthesis of the evaluative conferences, the following general conclusions were derived about the usefulness of the model of inservice education for the beginning teachers who participated. A representative comment from the conferences follows each general conclusion.

1. All teachers would participate in this program again.

> Yes, I definitely would volunteer to participate again--I really enjoyed it.

2. Most teachers did not believe the investigator could have been more useful to them during the program. Many believed this program was the only useful and constructive assistance they had received since the completion of their preservice education.

> I think this is a lot more valuable than student teaching.
>
> I don't think there is any way the individual conferences could have been more useful. I don't think they should be changed.

3. All teachers believed that the length of the program and the limited number of individual conferences the investigator was able to have with each teacher limited the amount of professional growth they were able to attain. They believed that to be most effective, there should have been more time between group sessions for individual conferences. The program for each group should have been at least one semester in length and if possible, two semesters or longer.

> I think for you to have been much more useful to us, the program would have to be on a much longer basis. Right now, I don't really know if I want that much help because everything is too experimental. We didn't have enough time to work on one thing. If I had time, perhaps three or four months, to work on group behavior and it still wasn't working, then I would like some help. One or two weeks isn't enough to judge the competency.

4. All teachers believed the feedback offered during the individual conferences was useful to them as they implemented ideas gathered during the group sessions.

> I thought the reinforcement and feedback of the observations and talking about the observations was good.

5. All teachers were disappointed that the program had to end.

> To be perfectly honest, when you came to me this summer the program sounded too good to be true. I thought that's easy for him to say now, but we will just see when we get involved. I couldn't imagine that it would be the way you said it would be, but from the very first it was. I can't believe it is over--I feel very bad about that.

> It is really a shame that the program has to end. I would like to see something like this for the beginning teacher because I think it is very valuable to each teacher.

6. All teachers will continue to use ideas and suggestions offered in the group sessions.

> I'm still using things we did in the first session. I'm still using them now even though you only observed the activity once, or I'm using parts of it that did work, that I thought were beneficial to the children.

7. The teachers believed the informal and non-class-like structure of the group sessions enabled them to express their opinions, to present and exchange ideas with

greater freedom and spontaneity than at any other time. The prevailing climate encouraged teachers to participate honestly, to admit they were having difficulties and to use or reject the ideas presented by their colleagues.

> None of us looked at anybody else and said I'm better or I'm worse than you. We all sat down and said we are doing these things--maybe yours worked and mine goofed, but this is what I gained from it. We all put in together and if we got stuck, you were there.
>
> I don't think there should be any changes in the group sessions. I think it was good just the way it was. It was informal and I think the informal part was good. We were all relaxed and willing to tell each other our problems--we all had problems and some were not brand new teachers.

8. The teachers appreciated the investigator's method of presenting the topic and fading to the background as a participant instead of overwhelming them with material and ideas. The impetus for discussion came from the group of teachers instead of the investigator.

> I was always afraid when we were having these real good conversations--I was always afraid you were going to cut us off and make us talk about something else. I liked it because we got talking on some very good things that I thought were helping me.
>
> Another point in favor of the way the topic was presented is that it made us feel that if we didn't want to talk about it right then and if we did have a problem, we could discuss it. It wasn't like now this is written down and this is what we have to do today like it or not. You know, like in the inservice meetings we always have. We have three points to cover and by gosh you cover those points and if you open your mouth and talk about something that you need or something that is going wrong, everybody in the place looks at you--like what are you trying to do, make us go over three o'clock.

9. Through the group sessions, most teachers realized common goals, problems, and the usefulness of working together on a problem.

> We were all able to open up. The best thing about the entire program was it made you feel as though you were not alone. You could go back to your classroom feeling that you were not the only one.

10. The teachers all believed that the investigator's non-evaluative and peer role in the school was central to the openness that the teachers exhibited during the group sessions and individual conferences. This openness and feeling of being able to request assistance with problems would have been much more difficult to attain, if at all, if the investigator had an evaluative or administrative role.

> There was a different feeling when you were in the room and when an administrator was in the room. Not because you are a teacher and an equal, but because you made me feel as though you were an equal. I think thats the biggest thing in the whole program. I felt you were just one of us or we were one of you. I don't know exactly how to say that--I just think it was a very good experience.

11. The content used in each session was not entirely relevant to all participants at all times. They believed that they should be given a greater voice in selecting the specific competencies to be used. (The teachers did select among five competencies--Appendix D.)

> I don't think there was anything wrong with the group sessions--I liked them. If anything, just extend them and cover more fields. I would have been interested in talking about testing a little bit--finding what it means and what you should look for in testing.

12. During the conference, many teachers requested more criticism of the teaching process as observed by the investigator.

> You didn't really offer any criticism and I would like some criticism to see where I can improve.

B. Students' Evaluation

The Inventory (Appendix F) was administered on three occasions--at the beginning of the program (September 17), at the completion of the program for Group A (November 6), and at the completion of the program for Group B (January 14). Students responded to a twenty-sentence Inventory as their communication of the classroom behavior of their teachers. The means for each item cluster (Appendix F) on each administration contain between five and thirty individual responses with an average of twenty responses.

A t-test was selected because of its applicability to small sample statistics. (Guilford, 1956, p. 218) The item clusters (areas) were compared using the t-test for uncorrelated means. (Guilford, 1956, p. 220) Using this test increases the possibility of Type II errors (accepting a null hypothesis when false.) (Guilford, 1956, p. 216) (Appendix F) The investigator realized that the t-test for correlated means should have been used, but the anonymous data gathered to reduce the possibility of student intimidation removed the possibility of matching responses on the Inventory. The investigator believes that because of the nature of the sentences on the Inventory, each student had to be guaranteed his anonymity. He needed to feel free to state his true opinion without fear that his teacher would find out how he perceived the teacher's behavior. Even with the assurance of the test administrator that the information was confidential, if the child's name was on the Inventory, there could have been a restriction or holding back of true perceptions. The anonymous Inventory did guarantee each student this confidence. In his study, Gage (1963a) used an anonymous inventory. "The booklets were administered by the teacher according to detailed instructions that insured anonymity of the pupils." (Gage, 1963a, p. 263)

The results of the t-tests were analyzed using a two-tailed test of significance. (Kerlinger, 1967, p. 163; Guilford, 1956, pp. 167-68)

Tables One and Two illustrate the results of the comparison of the means on the three administrations of the Inventory. (Appendix F) A plus (+) indicates those areas of change* (1.25 standard score or higher) toward behaviors associated with the competency, as an example teacher B--Competency II (September-November). A zero (0) indicates those areas in which no change (1.24 standard score or less) occurred, as an example teacher C--Competency II

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*Change is accepted if the standard score of the difference between means exceeds 1.25. At this standard score there is one chance in five that the change was a random occurrence.

TABLE 1

DIRECTION OF CHANGE AND STANDARD SCORE ON A T-TEST COMPARISON OF DIFFERENCES IN MEANS ATTAINED ON THE INVENTORY--SEPTEMBER-NOVEMBER COMPARISON

Experimental Group A		COMPETENCY		
TEACHER	I	II	III	IV
A	+ (1.30)	0	0	0
B	0	+ (1.89)	0	0
C	0	0	0	+ (1.49)
D	0	- (1.90)	0	0
E	0	0	0	+ (1.53)
Control				
F	0	- (3.50)**	0	0
G	0	0	- (1.60)	0
H	0	0	0	0
J	0	0	+ (1.90)	0
Control				
K	0	- (2.15)*	- (2.14)*	- (1.96)
L	0	- (1.82)	0	0
M	0	- (2.40)*	- (1.83)	0

TABLE 1 Continued

Control

TEACHER	COMPETENCY I	 II	 III	 IV
N	0	- (2.41)*	0	0
O	0	- (1.80)	0	0

+ Standard score of 1.25 or higher on t-test used to compare means toward behaviors associated with the competency

O Standard score of 1.24 or less

- Standard score of 1.25 or higher on t-test used to compare means away from behaviors associated with the competency

* .05 level of significance

** .01 level of significance

TABLE 2

DIRECTION OF CHANGE AND STANDARD SCORE ON A T-TEST COMPARISON OF DIFFERENCES IN MEANS ATTAINED ON THE INVENTORY--NOVEMBER-JANUARY COMPARISON

Post Experimental

TEACHER	COMPETENCY I	 II	 III	 IV
A	- (1.36)	- (1.27)	- (2.25)*	0
B	0	0	0	0
C	0	0	0	0
D	0	0	0	0
E	0	0	0	- (2.05)*

TABLE 2 Continued

Experimental Group B			COMPETENCY	
TEACHER	I	II	III	IV
F	0	0	0	0
G	+ (1.36)	0	0	0
H	0	0	0	0
J	0	0	0	+ (1.37)
Control				
K	- (1.66)	- (2.10)*	- (1.59)	0
L	0	0	0	0
M	0	0	0	0
N	0	0	- (2.18)*	0
O	0	0	0	0

+ Standard score of 1.25 or higher on t-test used to compare means toward behaviors associated with the competency
0 Standard score of 1.24 or less
- Standard score of 1.25 or higher on t-test used to compare means away from behaviors associated with the competency
* .05 level of significance
** .01 level of significance

(September-November). A minus (-) indicates those areas of change (1.25 standard score or higher) away from behaviors associated with the competency, as an example teacher G--Competency III (September-November). Where the changes reach the level of significance (two-tailed test), the appropriate level, .01 or .05, is noted, as an example teacher F-- Competency II (September-November). Some nearly significant changes were rejected because of the conservative t-test applied. As an example, teacher E--Competency IV (September-November) exhibited a less than significant difference from September to November. The standard scores must be interpreted in relation to the ability of the primary age children to discriminate between behaviors. This is discussed in Appendix F.

1. Hypotheses Two and Four

From the substantive hypotheses, these null hypotheses are proposed.

> 2. At the completion of the inservice education program for Group A, the students in the control groups will perceive a change, measured by the Inventory, in the classroom behavior of each teacher toward the four competencies.
>
> 4. At the completion of the inservice education program for Group B, the students in the control group will perceive a change, measured by the Inventory, in the classroom behavior of each teacher toward the four competencies.

A review of Tables One and Two indicate that generally there is no change toward behaviors. In only one instance does any teacher exhibit a change toward behaviors associated with a competency while a member of a control group, teacher J--Competency III (September-November).

Teachers F, K, M, and N exhibited significant, .05 level, changes in means away from behaviors associated with the competency. Therefore, the investigator rejects null hypotheses two and four.

2. Hypotheses One and Three

From the substantive hypotheses, these null hypotheses are proposed.

> 1. At the completion of the inservice education program for Group A, the students in this group will not perceive a change, measured by the Inventory, in the classroom behavior of each teacher toward the four competencies.
>
> 3. At the completion of the inservice education program for Group B, the students in this group will not perceive a change, measured by the Inventory, in the classroom behavior of each teacher toward the four competencies.

While there was change* toward behaviors associated with the competencies by teachers immediately after participating in the inservice education program, none of the differences in the means reached the .05 level of significance. Therefore, the investigator cannot reject the null hypotheses. The differences in means did provide some evidence that an increase in classroom behaviors associated with the competencies was perceived by the students, particularly: teacher A--Competency I (September-November), teacher B--Competency II (September-November), teacher C--Competency IV (September-November), teacher E--Competency IV (September-November), teacher G--Competency I (November-January), and teacher J--Competency IV (November-January).

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3. Hypothesis Five

From the substantive hypothesis, this null hypothesis is proposed.

> 5. At the completion of the inservice education program for Group B, the students in Group A will not perceive a change, measured by the Inventory, toward the competencies beyond that recorded at the completion of the inservice education program for Group A.

Teachers in Group A between November and January did not display significant change in behaviors associated with the competencies. Therefore, the investigator cannot reject the null hypothesis. In two cases, teacher A--Competency III (November-January) and teacher E--Competency IV (November-January), change away from behaviors was statistically significant at the .05 level.

Teacher C on Competency IV (January) continued change toward behaviors associated with the competency beyond that evidenced on the November Inventory at the completion of her participation in the program. This is one instance to indicate that growth toward the behaviors may continue, but in the majority of cases, no further change in the means toward the behaviors occurred or a change away from the behaviors occurred.

The negative changes in behaviors associated with the competencies exhibited by many of the control group teachers can have one or more of the following explanations.

1. The pre-test may have alerted the children to behaviors they had not expected their teacher to exhibit.

2. The change in behaviors associated with the

competencies from September to November could be an expression by the children that the expectations they had for their learning experiences in September had not been fulfilled in November.

3. The change in behaviors associated with the competencies from November to January could be an expression by the children that the expectations they had in September were still not being fulfilled. The negative change in Group A, November to January, could be the same type of expression modified by the fact that the children had perceived a positive change in behavior in November and then a reduction in the teachers' use of the behaviors.

Although there were few positive changes in experimental Groups A and B, there was only one negative change. Therefore, this program was able to help teachers meet the expectations of their students and provide a useful learning situation.

The less than significant differences in pupils' perceptions of the classroom behaviors in relation to the teacher's perceptions of the program, as discussed in Section A and D of this Chapter, can have one or more of the following explanations.

1. The Inventory was not sensitive to the behavior change that was occurring.

2. The pupils may have been unable to perceive differences in behavior, discriminate levels of behavior, or communicate this via the Inventory.

3. The behavior did not occur for a long enough period of time to have become a permanent part of the teachers' behavior pattern.

4. Some competencies take much longer to develop than the time provided.

5. The conservative less than appropriate t-test increased the possibility of Type II errors.

The Inventory was sensitive to behavior change and did measure behaviors associated with each competency (validity). This was evidenced by the significant differences in the means of some competencies of teachers in the control groups away from behaviors associated with the competencies. The pupils were able to perceive differences in behavior and communicate the changes on the Inventory. The Inventory did not sample all possible behaviors associated with each competency and perhaps this contributed to the few significant differences. The length of the program may have increased the difficulty of students in perceiving a statistically significant change in behavior. The conservative t-test may have further masked any change.

The program for Group A was thirty-six working days and for Group B thirty-seven working days. In the teachers' opinion, this should have been longer in order to work on four separate competencies. There was just time to begin the competency development and not time to follow through and assist the teachers with difficulties that occurred after a period of time.

The behaviors associated with each competency did not have time to become a permanent part of each teacher's behavior pattern as evidenced by the November-January change (Table 2) for Group A. Only one teacher (C) continued change toward behaviors associated with the competencies. Other teachers' behaviors after having changed toward the behaviors associated with the competency in November, changed away from the behaviors associated with the competency in January. Teacher A and teacher E changed so much that the difference was statistically significant at the .05 level. Teacher A commented, when the investigator discussed the Inventory results after the completion of the program, that she had not continued all changes since the investigator had stopped his assistance in November. She believed that this was not intentional, but with her full-time duties she slipped back into her established behavior patterns without fully realizing she had. In Boyd's (1960) study, most of the hypotheses were not supported by the objective data. Feedback from teachers participating in the study established that the teachers believed that the program was valuable and gave them new insights into childrens' growth, development, and learning which caused them to change classroom behaviors in a way noticeable to them. (Boyd, 1960, pp. 100-1)

C. Summary

Although not statistically significant, change toward behaviors associated with the competencies occurred.

Students in the classes of some experimental teachers, immediately after they had participated in the inservice education program, communicated that more of the behaviors were being exhibited than before participation in the program. Teachers, in their evaluation, said they are using ideas presented in the group sessions and trying methods of teaching that they had not tried before participating in the program.

The conservative t-test used to test the differences in the means did increase the possibility of Type II errors (accepting a null hypothesis when false.) (Guilford, 1956, p. 216) (Appendix F) Some of the changes toward the behaviors associated with the competencies were close to significant (.05 level). If it had been possible to use the most appropriate t-test for repeated measures, with its reduction factor in the denominator for commonality of variance, some of the differences might have been statistically significant. The investigator was not able to use the t-test for repeated measures because responses could not be paired. (Guilford, 1956, p. 220)

The control group exhibited only one change in means toward behaviors associated with a competency. The experimental group exhibited six changes in means toward the behaviors associated with the competencies. The control group exhibited fourteen changes (seven statistically significant) away from behaviors associated with the competencies. The experimental group exhibited one change away from behaviors associated with the competencies. The control group exhibited forty-one instances of no change in means. The experimental group exhibited twenty-nine instances of no change in means.

The experimental teacher who continued to show the most consistent change toward behaviors associated with the competencies in the period of time after completion of her participation in the program was the teacher whom the investigator continued to assist on an informal basis. This was done at the request of the teacher and the administration. It appears that continued change toward the behaviors associated with the competencies is encouraged by continued assistance.

An overall view of this application of the model of inservice education is that teachers believe they were assisted as they continued their development as professionals. The students' responses to the Inventory did not offer statistically significant data to support the teachers' beliefs concerning the assistance the program offered in their development of behaviors associated with the competencies. This may have been caused by the conservative t-test increasing the likelihood of Type II errors, the selective nature of the behaviors measured by the Inventory, or the length of the program inhibiting development of behaviors. In Boyd's (1960) study, most of the hypotheses were not supported by the objective data. Feedback from teachers participating in the study established that the teachers believed that the program was valuable and gave them new insights into childrens' growth, development, and learning

> which caused them to change behaviors in a way noticeable to them. (Boyd, 1960, pp. 100-1)

Each teacher's comments concerning the program are listed in the following section.

D. Discussion of Evaluative Conference and Inventory

Comments during the evaluative conferences and the students' responses (means) for each of the experimental teachers will be discussed.

Teacher A was a member of the experimental group from September to November. On the comparison of the September-November Inventories, the means for Competencies II, III, and IV were unchanged. The mean of Competency I changed toward the behaviors associated with the competency. On the comparison of the November-January Inventories, the mean for Competency IV was unchanged. The means for Competencies I and II changed away from the behaviors associated with the competencies. The mean for Competency III changed, .05 level of significance, away from behaviors associated with the competency. At the completion of the program (November), teacher A had these comments.

> I thought the group sessions to talk things over, get ideas to carry out in your classroom and talking them over with you was good. I think everything we did discuss was good and we all got something out of it.
>
> The thing I liked best about the group sessions was that I found other teachers were having the same problems I was. We don't get to see this because we are stuck in our classrooms.

> If we are having a problem, it would be a good idea to be able to schedule an observation and conference to talk about this problem, then offer help with ideas. Maybe first an observation and then a conference--what you see is wrong and what I see is wrong --someone to help with ideas about what is going wrong with a specific area.

Teacher B was a member of the experimental group from September to November. On the comparison of the September-November Inventories, the means for Competencies I, III, and IV were unchanged. The mean for Competency II changed toward the behaviors associated with the competency. On the comparison of the November-January Inventories, the means for Competencies I, II, III, and IV were unchanged. The positive change in the mean for Competency II was continued after the completion of the program. The positive, though less than significant change is supported by the statements of teacher B at the completion of the program (November).

> When I got to the first meeting (group session) I was really glad--I learned a lot from it.
>
> One day I was completely ready to tell you not to come in my room. You told me I could say it if I ever wanted to and I was ready to, but I did tell you to come in.
>
> The pamphlet we had to fill out evaluating the school district for the Appalachia Schools Committee stimulated a lot of conversation in our building, particularly the section on inservice education programs. It sounded too artificial not to find anything wrong with your inservice program, but what we were doing met the criteria for an excellent program.

Teacher C was a member of the experimental group from September to November. On the comparison of the September-November Inventories, the means for Competencies I, II, and III were unchanged. The mean for Competency IV changed toward the behaviors associated with the competency. On the comparison of the November-January Inventories, the means for Competencies I, II, III, and IV were unchanged. The positive, though less than significant change is supported by the statements of teacher C at the completion of the program (November).

> Well I think the program was very good and very helpful to me. I learned a lot more since I've been in this inservice program than if I had not been included. I would probably be a lot more frustrated with my class if I hadn't gotten all the help I did. I'm glad I came in now. I wasn't exactly sure what it was when you asked me to be in it, but now that I'm in it, I'm very glad. When you explained it, I still didn't know what you meant and didn't know what it would include, but now that I have participated, I wish it would be longer because it has helped me so much.
>
> The discipline topic (Competency IV) was most relevant.
>
> The only way you could have been more useful to me during the program was by having more conferences with me.

Teacher D was a member of the experimental group from September to November. On the comparison of the September-November Inventories, the means for Competencies I, III, and IV were unchanged. The mean for Competency II changed away from the behaviors associated with the competency. On the comparison of the November-January Inventories, the means for Competencies I, II, III, and IV were unchanged. At the completion of the program (November), teacher D had these comments.

> I thought the inservice education program was excellent. I found out many many things I didn't know and received many many ideas and opinions on things I had done. I really enjoyed it. I thought it was very

> interesting. I wouldn't mind having these group meetings once a month because I think it was very helpful.

> We felt free to talk, to say anything we wanted to say whether it pertained to the stated topic or not. This was very helpful--an idea popped into our heads and we were free to convey it.

> I liked the idea of putting children on their own. I really never thought about it and if I did, I felt that it wouldn't work in my class, so naturally I wouldn't have tried it if I hadn't been in the program.

Teacher E was a member of the experimental group from September to November. On the comparison of the September-November Inventories, the means for Competency I, II, and III were unchanged. The mean for Competency IV changed toward the behaviors associated with the competency. On the comparison of the November-January Inventories, the means for Competencies I, II, and III were unchanged. The mean for Competency IV changed, .05 level of significance, away from the behaviors associated with the competency. (This teacher believed that for change to become permanent, the program should be much longer with more individual assistance.) The positive, though less than significant, change is supported by the statements of teacher E at the completion of the program (November).

> First of all, the program was a big help to me as a teacher and to my children. I'll start with me first because I learned a lot that I know I would normally not have learned in a school year from other teachers. Talk in a normal faculty room is more or less getting off your chest something bad that has happened or something good that has happened. We don't sit down and try to give any kind of help to one another which is what we got in the group sessions. The sessions are good for a lot of things, but one stands out in my mind and

that is getting help from somebody else. Also, you had ideas that worked. There is no other time this year that we will get together with anyone and that we can say, this worked for me, why don't you try it. I walked out of the group sessions full of ideas and things to do with the kids that I know I wouldn't have had because nothing is that stimulating in the school itself. I walked out with all kinds of things I wanted to try and I did a lot of them.

I think I know why I have a lot of enthusiasm for the program. I think its one of the first times someone has come to a beginning teacher and said you may have ideas and thoughts, why don't we try them to see if they will work. Rather than saying do what the older teachers say, do what the principal says and don't break the rules for awhile; for the very first time someone has said here is a class, let's try things.

This is the first time anyone has walked into my room to observe me and it hasn't bothered me in the least.

I felt perfectly free to say whatever I thought during the group sessions. Anything we have ever tried, if I have asked, the children have liked it.

Children, I have learned, have quite a few ideas and if left on their own, they can come up with a lot of things. As much as I always thought if you give the children an inch they will take a yard, it is not always true. If they are trained from the beginning to do a little bit on their own, they will.

It is my personal feeling that a lot more was accomplished in the individual conferences. I think there should be more individual conferences because I can tell you everything I think and in the group sessions you may hear one-fifth of what I have thought about or by next time, I will have forgotten it.

You gained our confidence from the very beginning because of so many things such as giving us the freedom to talk and the freedom of your having been emotionless throughout most of this. You sat there and listened, which to me was great. I didn't see any emotion, I didn't see any little smile that meant wait till I tell her what I think. We never got any of this, you helped us all individually. You never once stopped us when we had a problem and said, well we came here to discuss a specific topic. You let us talk and in that way I think you

> gained all of our confidence. You sat there and seemed so very interested. I thought I don't care how much training you have, you still personally must want to get back to the topic of discussion, but you will not show it. I kept watching for it, but you didn't show any displeasure, so training probably does play a part.

Teacher F was a member of the control group from September to November. On the comparison of the September-November Inventories, the means for Competencies I, III, and IV were unchanged. The mean for Competency II changed, .01 level of significance, away from behaviors associated with the competency. On the comparison of the November-January Inventories, the means for Competencies I, II, III, and IV were unchanged. Teacher F had these comments at the completion of the program (January).

> I think the program is very beneficial--it helped me a lot in seeing new and different ideas. You look at the children differently, you don't look at them as someone to talk to, but you try and meet their needs.
>
> I will particularly use the idea of working with smaller groups--as in reading.
>
> I think it should have lasted longer, if anything. It could even last both semesters. I think that it would be helpful for beginning teachers.
>
> What I liked most about each group session was that they helped my attitude toward teaching. I think to a lot of people teaching is just a job, maybe I'm wrong. When you talk with other people, it becomes more trying to teach the right way.

Teacher G was a member of the control group from September to November. On the comparison of the September-November Inventories, the means for Competencies I, II, and IV were unchanged. The mean for Competency III changed away from behaviors associated with the competency. On the comparison of the November-January Inventories, the means for Competencies II, III, and IV were unchanged. The mean for Competency I changed toward the behaviors associated with the competency. The positive, though less than significant change, is supported by the statements of teacher G at the completion of the program (January).

> I think it is excellent and I think every new teacher in the district would benefit highly from this program. It's a very good program--getting together with other people that are in the same situation as you are and being able to talk about anything you want to talk about in relation to your boys and girls, also to exchange ideas about what you can do to help children who are having difficulties. I got many good ideas in the use of different academic materials. This has to do with the program, but it is a compliment to you and I mean this sincerely. I didn't feel as though it was Joe's program and I was helping out. I felt as though it was our program and I think that improved it 100%. You made us feel that we were doing this together rather than you were telling us exactly what to do.
>
> The group sessions were something I really looked forward to. Last year I didn't like to leave my class and anytime I had to go I thought it was bad because I would rather be here teaching. However I looked forward to the sessions because there was such a different atmosphere--its not like an inservice meeting where you sit and listen all day. It was just great to be able to throw your two-cents worth in anytime you felt like it, so I looked forward to all of them.
>
> I can't imagine that any teacher who goes through the inservice program that we have now in the school district--that involves you going, sitting, and listening--I can't imagine that anyone could prefer that after being involved in this program. I can't ever remember a session where for maybe more than two minutes while we were collecting our thoughts that there was a lull in the conversation. It just went on, one person picked it up where the other one dropped off. I really thought that it was great.

> The only change I would suggest for the group sessions would be to extend the time and if possible, visit other teachers' classrooms. Those are the only two recommendations for change. I gave them a great deal of thought, but I was so enthusiastic about the program that these are the only two suggestions I have.
>
> I can't imagine how you could have been more useful to us.

Teacher H was a member of the control group from September to November. On the comparison of the September-November Inventories, the means for Competencies I, II, III, and IV were unchanged. On the comparison of the November-January Inventories, the means for Competencies I, II, III, and IV were unchanged. Teacher H had these comments at the completion of the program (January).

> I'll tell you the program is fantastic. I think this should be initiated for every first year teacher in the school district. I think it should be for a longer period of time than we had.
>
> I wish I had had this last year. (her first year of teaching)
>
> The group sessions should be spaced more so that you could come and observe more often because I think that is the crucial point in this whole program. The meetings are terrific and you get interesting and new ideas, but I think you need an observation. I really enjoyed the two observations instead of one for each competency.
>
> I think it should be for every first year teacher because I believe it really builds your ego. You realize there are other teachers in the same system with the same problems you have. You feel more relaxed, you feel more at ease and it really builds you up. You feel that someone was supporting you as you attempted new things.
>
> I loved the informal nature of the group sessions. You are more at ease and I think you feel ready to discuss your problems. If it were formal you would be in the graduate session where there are

> so many people you hate to raise your hand and you feel restricted. When they are informal and someone says something that sparks you, you can follow it instead of the set topic.
>
> I would suggest that the group session be a little longer because the time seemed to go so fast. It didn't seem as though it were one and one-half hours. It honestly seemed about a half hour. The time would go so fast that I was amazed how quickly the afternoon had gone.
>
> Other than maybe more individual conferences, I can't really think of any way you could have been more useful.

Teacher J was a member of the control group from September to November. On the comparison of the September-November Inventories, the means for Competencies I, II, and IV were unchanged. The mean for Competency III changed toward the behaviors associated with this competency. This was the only positive change in means by any teacher while a member of the control group. On the comparison of the November-January Inventories, the means for Competencies I, II, and III were unchanged. The mean for Competency IV changed toward the behaviors associated with the competency. The positive, though less than significant change, is supported by the statement of teacher J at the completion of the program (January).

> I probably would not have tried committee work with these little children if we hadn't talked about it--I know I wouldn't have.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

When teachers have completed their preservice education, they have attained a level of competency development necessary to begin their teaching careers. They have not obtained a level of competency development needed for continuing success as teachers. Before they can become fully functioning professionals, they need to further develop those competencies begun in preservice and to begin developing new competencies.

The present inservice (continuing) education of teachers is, for the most part, each individual teacher's responsibility to plan and implement. School systems today use inservice education to assist teachers with professional growth, but mainly in large group information giving sessions with little or no opportunity for each teacher to present his needs. There are no provisions in most present inservice programs to help teachers deal with the specific needs of the children in their classroom or systematically assist them with their individual professional development. The authors of the nine models of elementary education sponsored by the United States Office of Education were unanimous in their beliefs that the preservice and inservice development of teachers is a continuum. There must be as much care given to planning the inservice education of teachers as their preservice education.

The investigator assumed that the problem of assisting inservice teachers, with full-time classroom responsibility, with their continued professional development included six elements. The investigator reviewed the literature to determine how teachers can be involved in their professional development and helped to make changes or attempt new behaviors in their classroom. Also, they should be helped to learn how to increase the usefulness of information and systematize assistance. It was ascertained from the literature that feedback to teachers of occurrences in their classrooms, relevant to the competency or behavior under development, helped them bring about behavior change or reinforced the behavior desired. The literature indicates that small group sessions can help teachers identify behaviors or competencies they wish to develop and plan for the implementation of these behaviors in the classroom. These sessions have been used to introduce and discuss behaviors (competencies) and to stimulate teacher interest in continuing the development of the competencies.

Based on these considerations, this inservice education model included small group sessions for teachers to discuss a competency with its associated classroom behaviors, to hear how others have implemented this general competency in their classrooms, to receive suggestions of how specific behaviors associated with the competency might assist them with children in their classroom, and to determine how they could implement these behaviors with specific materials and children.

Since this program is based on the individual needs of a teacher in his classroom, all other assistance with each competency development was between each teacher and the investigator. Planned classroom observations of at least forty-five minutes were made by the investigator as the teacher implemented behaviors associated with each competency. The teacher and investigator then conferred using the perceptions of the teacher and the investigator to determine the success of the implementation of the behaviors associated with the competency. Whenever possible, the investigator completed two observations and conferences with each teacher for each competency.

So that this professional development would not become an addition to each teacher's full-time job, released time was provided during the school day. The released time consisted of one-half day (three hours) for each competency. The group session was one and one-half hours long. The remaining one and one-half hours were used by each teacher to plan and work as desired. This time for planning was given to the teachers because the individual conferences were held on school time during each teacher's regularly scheduled planning periods. Therefore, these regularly scheduled times were not available to the teacher for planning.

To test the usefulness of this model to help teachers continue their professional development as in-service teachers, a one-semester program for beginning, female, primary teachers was designed. Because of the formal evaluation of the study, the investigator was not able to permit teachers participating in the study full freedom in identifying and selecting competencies to be developed. The teachers did select from five competencies synthesized by the investigator from literature defining problems and areas of concern of beginning elementary teachers. Behaviors associated with the competencies were identified to help the investigator plan activities for each group session and in constructing an evaluation of the program. The design of the study included four group sessions--one for each of the four competencies selected by the teachers. These are:

Competency 1: Develop on-task pupil talk and help students verbalize their academic difficulties.

Competency 2: Use students' ideas and have students help in planning some group and individual activities.

Competency 3: Use a wide variety and different levels of academic materials.

Competency 4: Deal with each student's off-task behavior in relation to the individuality of that student.

The beginning primary teachers who volunteered for the program were assigned to two groups with five teachers in Group A and four teachers in Group B. A beginning teacher is defined as one with a teacher's certificate and two semesters or less of teaching experience. Five experienced (more than two semesters of experience) primary teachers were a control group.

The investigator used the activities planned for each group session to stimulate discussion concerning the topic. For at least part of the group session, teachers were free to discuss topics, other than the planned topic, that were more relevant for them at that time. The investigator, during the sessions, always attempted to synthesize a particular action or solution toward a more general rule or behavior that could be used in many situations. The investigator and each teacher then individually implemented the ideas and suggestions offered in each group session in that teacher's classroom.

An evaluation of the inservice education model was conducted by the teachers who participated and the students who are in these teachers' classrooms. The teachers' evaluation took the form of an evaluative conference at the completion of their participation in the program and feedback concerning their perceptions of the program during their participation via comment sheets made available to them. The teachers, in their evaluation of the program, believed that it had been the most useful assistance they had received to help them continue their professional development and improve their classroom instruction.

The students' evaluation took the form of a twenty-sentence Inventory on which they recorded their perceptions of teacher behavior observed in the classroom. Students responded to the anonymous Inventory three times.

There are no specific reliability coefficients (r tt) for each of the competencies because of the anonymous and five response organization of the Inventory. An instrument must be measuring the universe desired (validity) and doing this consistently (reliability) for statistically significant differences to be obtained. On the Inventory used in this study, there were nine statistically significant differences in means attained.

As hypothesized, the means for the control groups did not change toward behaviors associated with the competencies. In only one instance of a total of fifty-six comparisons was there a change in means toward behavior associated with a competency. In fourteen instances, seven statistically significant, there was a change in means away from behaviors associated with the competencies. In forty-one instances there was no change in the means, as hypothesized.

In the experimental groups there were no statistically significant changes in means toward behaviors associated with the competencies. There was change in six instances toward behavior associated with the competencies, but the changes were not statistically significant. There was one change in means, not significant, away from behaviors associated with the competencies. There were twenty-nine instances of no change after the teachers had participated in the program.

On the Inventories administered in experimental Group A's classes in January, after Group A had not been participating in the program for two and one-half months, four means changed away from behaviors associated with the competencies, two of them statistically significant. Two of these means had changed toward behaviors associated with the competencies at the completion of the program in November. This offers some evidence that the program was not of sufficient length to have the change in behavior become a permanent part of each teacher's behavior pattern.

The analysis of the students' perceptions of the usefulness of the program does offer some evidence that students did perceive change toward behaviors associated with the competencies immediately following their teacher's participation in the program. This was not evidenced in changes in the means of teachers in the control groups. Some of the changes in means of the experimental group almost reached the .05 level of significance and if the program were longer with more assistance offered, the changes in means might have been statistically significant.

The inservice education program using group sessions and individual feedback to assist teachers with their continued professional development was perceived by the teachers who participated as extremely useful. They believed that beginning teachers, in fact all teachers, would benefit from participating in this program.

The students' reaction, via the Inventory, to the program was not as conclusive concerning the usefulness of the program. Students communicated some change toward behaviors associated with the competencies in the teachers' classroom behavior, but in no instance was this statistically significant. The recommendations should increase the likelihood of students perceiving statistically significant change in the classroom behavior of teachers.

The results of this study with its present organization lead the investigator to offer the following recommendations concerning future applications of this model with inservice teachers.

1. The program should be at least one full semester, preferably two semesters or longer for each group participating.

2. If the program is only one semester in length, the number of competencies worked with should be reduced, the length of time between group sessions increased, and more individual observations and conferences completed with each teacher.

Inservice education today is offering minimum help to teachers as they continue their professional development. Programs, such as the one in this study, are being developed to increase the relevancy of inservice education for teachers as they attempt to improve their classroom instruction and provide stimulating learning environments. This program was much more useful to the teachers who participated than the program presently available in the school district, which is a typical inservice education program. There are various incentives and reasons for school districts to consider this innovative inservice education program. One incentive, in Pennsylvania, for a systemized inservice education program in a school district is that the Pennsylvania Department of Education will grant up to six credits toward the twenty-four required for permanent certification to teachers who participate in an approved inservice education program. This inservice education program should meet Department of Education standards for approval.

The program is very inexpensive. In this study, the cost for the nine teachers was approximately $600.00 (for substitute teachers). The cost per teacher was even further reduced by a ripple effect evidenced in the program as teachers who participated in the study discussed what they were learning with other teachers in the district. Therefore, more teachers than those who participated profited from having this program available. If this nominal sum is too great for the school district to commit to inservice education, an alternate plan is available. Some school districts are using parent volunteers to act as substitute teachers so that regular teachers can attend meetings. This system can easily be used in this program.

A change must be made in the role of the professional in charge of inservice education. His job description (role) _must_ be structured so that this person has _NO_ rating or evaluative function and this is his full-time responsibility. If the person must evaluate performances of teachers, the usefulness and worth of the program to the teachers who participate will be greatly reduced. The professional must be skilled in supervision as theorized, taught, and practiced in many university departments of supervision, such as the Department of Curriculum and Supervision of the University of Pittsburgh. In these programs, supervision is defined and practiced as a helping profession, not an evaluative one. Counseling skills are useful to the professional mainly because they help those who possess them to focus on and be sensitive to the individuality of each person and accept each person as a worthy individual who has worth-while contributions to make. The professional will use the supervisory and counseling skills in the group sessions and individual conferences. Examples of how they will be used follow.

By listening more than talking;
By drawing out and encouraging ideas and comments from the teacher participants;
By keeping information confidential;
By being supportive of ideas and suggestions presented;
By acting as a participant and equal and not as a judge;
By encouraging a partnership in change so that the teacher is willing to attempt new behaviors;
By being supportive of the teacher as he attempts change;
By being open and honest in all dealings with the teacher.

As can be seen, the professional who is in charge of this program does not have to be a primary teacher or to have had experience as a primary teacher. In fact, all teachers, beginning or experienced, elementary or secondary can use this program if the professional fulfills his role expectation.

To implement this program most successfully, the teachers who will be participating should be given as much opportunity as possible to plan their specific program. This can be accomplished by having the first meeting of teacher participants focus on which competencies their group will work with. An interval of time should elapse while the professional in charge of the program constructs or collects appropriate background materials to be used in each session.

This inservice education program is a useful, inexpensive, individualized program that could be implemented by any school district that wants to help all of their teachers continue their professional development, thereby improving classroom instruction and the learning situation for children.

APPENDICES

APPENDIX A

PLACEMENT OF THE COMPETENCY AREA ON A CONTINUUM

To place the competency area, assisting students in becoming independent autonomous learners, on a continuum of competencies is a difficult task because researchers disagree over the competencies that teachers must possess to be effective. The researcher's rating of a teacher's effectiveness is often biased depending on the theory of learning he believes explains teaching most adequately. (Gage, 1963b, pp. 116-117, 133, 710)

The models of innovative elementary education commissioned by the Office of Education, United States Department of Health, Education and Welfare state that preservice and inservice education are a continuum in the development of competent teachers. They also state that preservice education does not provide the beginning professional with the level of competency development needed for continuing success as a teacher. A viable inservice education program for beginning teachers can continue to develop and broaden those competencies which were begun in preservice education with the assurance that they will be relevant to the needs of the beginning teacher. Some of the competencies the teachers will begin developing during the preservice education in the innovative models of elementary education commissioned by the Office of Education follow.

Examples of the University of Pittsburgh competencies are:

1. planning long-term and short-term learning programs with pupils
2. guiding pupils in their learning tasks (O.E., U.S.H.E.W., 1968e, pp. 16-17)

Examples of the State Universities of Ohio competencies are:

1. each teacher should be prepared to employ teacher behaviors which will help every child acquire a positive attitude toward the learning process
2. each teacher should be prepared to employ teacher behaviors which will help every child acquire opportunity and encouragement to be creative in one or more fields of endeavor
3. each teacher should be prepared to employ teacher behaviors which will help every child understand the opportunities open to him for preparing himself for a productive life and should enable him to take full advantage of these opportunities
4. each teacher should be prepared to employ teacher behaviors which help every child prepare for a world of rapid change and unforeseeable demands in which continuing education throughout his adult life should be a normal expectation (O.E., U.S.H.E.W., 1968d, pp. 19-20)

Examples of the Florida State University competencies are:

1. the teacher will select and organize content appropriate to specified objectives in a manner consistent with both the logic of the content itself and the psychological demands of the learner
2. the teacher will employ appropriate strategies for the attainment of desired behavioral objectives (O.E., U.S.H.E.W., 1968c, pp. 62-69)

The competency area used in this inservice education program will continue developing many of the competencies thought critical for preservice teachers in the innovative models of inservice education; therefore, it has a viable place in the continuing professional development of the beginning teacher.

APPENDIX B

ANALYSIS OF PROGRAM APPROVAL

The strategy followed in attaining approval for this inservice program was modeled after those in "Charting the Decision-Making Structure of an Organization" by John L. Wallen in the O.E., U.S.H.E.W. report, A Competency Based, Field Centered, Systems Approach to Elementary Teacher Education, Volume III, pages 188-200. This approach uses the decision-making structure of an organization and includes the amount of influence and kind of participation each organizational position has in relation to various decisions.

The various kinds of influence any position in the school system may exercise are:

CODE	KINDS OF INFLUENCE
	May recommend or suggest -- any person may make recommendations to a person who can authorize action. Because this is assumed for all positions, the cell is left blank.
I	Must be informed -- is usually in a position affected by the decision or will have to implement it.
C	Must be consulted -- position must be given opportunity to influence the process of arriving at a decision. A "C" position is limited to persuasion in influencing the decision.
A	Approval must be secured -- position must be consulted and may veto a proposed decision. If "A" position approves, this is a recommendation for the course of action. If an "A" position disapproves, the proposal cannot be put into effect and must be altered to gain approval.

Z *May authorize* -- position issues a directive that triggers action. (O.E., U.S.H.E.W., 1968b, p. 191)

In the Decision Structure Chart, the decision is listed at the head of the column and the row heads list the position (decision makers).

POSITIONS	DECISION
	Approval of innovative inservice education program for beginning elementary teachers.
Teachers	
Counselors Nurses Social Workers Etc.	
Principals	I
Elementary Supervisors	C/A
Curriculum Coordinator	
Assistant Superintendent for Instruction	C
Superintendent	A/Z
Board of Education	Z

The symbols on the chart represent influence for this particular decision. The influence exerted by each position will probably be different for other decisions. The elementary supervisors, superintendent and the board of education are most influential in the decision to use this inservice program. Examples of decisions and implementations they will make are: the board of education must authorize the expenditure of funds for the program, the superintendent must authorize the release of teachers and investigator for the group sessions, and the elementary supervisors will provide the substitutes for the teachers and a meeting place for the group.

This is the route the decision should have taken according to the Decision Structure Chart and, in reality, this is the way the decision to use the innovative inservice education program was reached. Early involvement and support of the elementary supervisors influenced the superintendent to approve the program for the 1969-70 school year. Because of these approvals within the administrative staff, the board of education was willing to support the project.

APPENDIX C

GROUP INTERACTION SESSIONS

A. Pilot Study

During June, July, and August 1969, the investigator conducted a pilot study of the treatments to be used during each of the group sessions. This was done to help anticipate the amount of time needed for each activity since each of the group sessions was limited to ninety minutes. A small group of professional and non-professionals simulated each of the activities for each of the sessions. From this study, the investigator deduced that to work with a few activities in depth rather than to "cover" many activities gave unity to each session. It was further realized that to use the materials and activities as a structure or frame to operate within was not as effective as using them to stimulate interaction and involvement. The stimulation increased the teacher enthusiasm, spontaneity, openness, and interest in each session.

B. Interaction Sessions--Content and Process

Some conditions conducive to the transfer of learning are: a learning situation that promotes psychological success, directly verifiable information, minimally evaluative feedback and effective group functioning, and an opportunity to practice and deepen the competence. (Argyris,

1968) These conditions were considered in addition to the models of elementary education from the University of Pittsburgh, Florida State University, Ohio State Universities, Syracuse, Northwest Regional Educational Laboratory, and Georgia in the organization of content and process used in each group session.

There was a structure to each of the four sessions because of the structured teaching environment. To move away from structure too quickly may impair the teacher's ability to productively interact. (Hummel, 1968; Thelen, 1954, p. 101; Foreman, Poppen and Frost, 1967) In the implementation of the total inservice education program more unstructured interaction will be possible as the teachers become comfortable with the inservice education program. A structure provides freedom by setting limits and direction for the group action. The topic for each of the group sessions was one of the four competencies.

The following were used as general guides in all of the group interaction sessions.

1. The sessions were held in an informal setting to minimize the teacher (investigator)-learner (teacher) roles and encourage teachers to help in planning, to talk, and to verbalize their problems.

2. In all of the sessions, the investigator used the four competencies. When he assumed a leadership role, he acted or questioned so that extended responses were required and teacher interaction was encouraged.

3. The teachers were encouraged to bring specific examples of behavior or problems that had been discussed. Flanders (1963) found that when teachers had their own ideas and comments integrated into the program, they engaged in more experimentation and applied more indirect or flexible patterns of teacher influence in their classrooms.

4. The teachers were made to realize that there are other members in the group also attempting new behavior; therefore, each teacher was not alone in attempting innovation.

5. In the development of these behaviors, the thrust was to move from specific situations to general rules that can be used by the teachers in many classroom situations.

6. During any session when the group of teachers believed that a problem other than that planned was more relevant for them at that moment, the planned activities were curtailed for at least a portion of the session.

7. During the sessions, the first year teachers as members of the total school team were emphasized. This helped them realize how they will work with other teachers and specialists. Also emphasized was the assistance they can receive from the other members of the school staff--teachers, specialists, and administration.

8. The materials and treatments listed for each group session were used as resources and stimulation materials when needed to assist the teachers as they discussed each competency. The treatments were followed in the order listed and not all were covered in some sessions.

Group Session: Orientation Meeting July 1969.

Topic: Introduction and explanation of inservice education program--Division One.

Objectives for Session:

(1) Teachers will comprehend the inservice education model and the role of the investigator.

(2) Teachers will perceive the background of the other beginning teachers.

(3) Teachers will comprehend why there is a flexible agenda for each meeting.

(4) Teachers will accept the reason for their students responding to the Inventory.

(5) There will be time given at the beginning of each session, if needed, to discuss any material the the teacher believes is relevant to this or previous sessions.

(6) Time will be taken, if needed, at the end of each session to plan for individual implementation of the methods or behaviors discussed.

Treatment:

(1) The investigator will explain his role, the reason for responding to the Inventory, inservice education model, procedures for the group sessions (where and when they will be held), and the flexibility of the content for the small group sessions.

(2) The teachers will present the portion of their background they feel will be useful for the other members of the group to know.

Materials: A handout (Appendix E) describing and explaining the inservice education process model, the place, time and general pattern of the group sessions will be given to the teachers.

Evaluation: The discussion with teachers of the inservice education model, procedures for the group sessions and type of questions teachers ask concerning the inservice education program will provide feedback for the evaluation.

Group Session: One.

Topic: Developing on-task pupil talk and having students verbalize their academic difficulties.

Objectives for Session:

(1) Teachers will demonstrate their understanding of classroom climate and describe its relevance to develop pupil talk.

(2) Teachers will interpret students' verbal and non-verbal communication about content and feed back to him questions or suggestions that will enable the student to clarify his weakness and determine how to correct it.

Treatment:

(1) Teachers will discuss different types of interaction and the possible effects on students and teachers. The investigator will emphasize the importance of classroom climate on student communication.

(2) Woodruff's and Galloway's work will be introduced by the investigator as systems the teachers can use to determine teacher influence in the classroom. The systems will also be used to alert the teachers to the varied ways students can be influenced.

(3) Teachers will discuss the types of questions that appear most effective in helping their students clarify their academic difficulties and those that promote the most productive interaction.

(4) Teachers will take part in microteaching sequences designed to help them practice various types of interaction and test questioning patterns that will help students verbalize or clarify academic difficulties. The "teacher" in the group will present a short lesson to the "students." They will, by questioning and interpreting students' responses, insure that all of the "students" comprehend the content and have fostered the type of interaction desired.

Materials:

(1) Content lessons for teachers to use in simulation session.

(2) Resources:
Perceiving, Behaving, Becoming - ASCD Yearbook 1962

Interaction Analysis - Amidon and Hough (pp. 121-140)
Teacher Influence, Pupil Attitudes and Achievement - Flanders' Cooperative Research Monograph, No. 12
Humanizing Education: The Person in the Process - Leeper (particularly Rogers, Houghton, Combs)
A Climate for Individuality - (particularly Chapter 3)
How Children Fail - Holt
The Work of the Counselor - Tyler (particularly Chapters 2 and 8)
A Guide to Effective Teaching - Woodruff
Clarifying as a Teaching Process - Klevan
Model of Non-Verbal Communication - Galloway

Evaluation: Teachers' discussion of types of questions that promote productive interaction and clarify student academic difficulties will indicate the depth of understanding.

Group Session: Two.

Topic: Using students' ideas and having students help in planning some group and individual activities.

Objectives for Session:

(1) Teachers will describe traditional teaching methods that inhibit divergent production in elementary students.

(2) Teachers will describe methods of encouraging elementary students to be creative in different media.

(3) Teachers will describe methods of encouraging productivity in elementary pupils. One method will include permitting students to assist in planning their learning activities.

(4) Teachers will identify the time and space requirements for the following forms of instruction:
   a. small group activities
   b. tutorial activities
   c. independent study

Treatment:

(1) Teachers will hold a brain-storming session to develop methods that will encourage creativity and productivity among their students. They will develop a list of activities that pupils can assist in planning.

(2) Some methods developed during the brain-storming session will be discussed to help determine their effectiveness in a classroom.

(3) Teachers will discuss: (1) the effect teacher expectancies may have on the self-concept of a student, (2) the effect of accentuating positive consequences of learning (success) and eliminating negative consequences (failure) on the students' attitude toward learning.

Materials:

(1) Resources:
   Pygmalion in the Classroom - Rosenthal and Jacobsen
   Individualization - Heathers
   Rewarding Creative Behavior - Torrance
   A Climate for Individuality - (particularly Chapter 3)

Self-Concept and Learning: Breaking the Vicious Circle - Lewis
Dynamics of Groups at Work - Thelen (pp. 32-70)

Evaluation: The effectiveness of the methods developed in the brain-storming session will indicate the depth of each teacher's understanding why and how students should and could assist in planning activities.

Bridge to Next Session: Teachers will bring samples of students' work that are examples of one type of media used in their classrooms.

Group Session: Three.

Topic: Use a wide variety and different levels of academic materials.

Objectives for Session:

(1) Teachers will discuss and see sources of information on instructional media.

(2) For the following media, teachers will give examples of ways that they have been used in their classrooms. They will also discuss the limitations and feasibility for every learner.
  a. books
  b. reference tools
  c. periodicals
  d. pictures
  e. charts and posters
  f. maps
  g. motion pictures
  h. television
  i. filmstrips
  j. overhead transparencies
  k. tape recordings
  l. models
  m. bulletin boards
  n. felt boards

(3) Teachers will list the advantages, disadvantages and feasibility of instructional simulation and academic games for every learner.

Treatment:

(1) Teachers will be given samples of sources of media available to the school district and discuss the process involved in obtaining materials not presently available in the school system.

(2) Teachers will present examples of the following instructional materials they have used in their classrooms:
  a. tape recordings
  b. flash cards
  c. flannel boards
  d. transparencies
  e. bulletin boards
  f. models
  g. printed materials

(3) Teachers will attend a presentation by the instructional media specialist of the school system. The presentation will include materials presently available and the future of the instructional media center will be discussed.

Resource Person: Instructional Media Specialist for the school district.

Materials:

(1) Catalogs (film libraries, equipment, free and inexpensive), bibliographies, textbooks, magazines and journals. Samples of teaching aids: flannel boards, filmstrips, tape recorder, projection equipment and administrative forms from the school district.

Evaluation: The degree to which teachers use instructional media that they had not used prior to the group session.

Group Session: Four.

Topic: Deal with each student's off-task behavior in relation to the individuality of that student.

Objectives for Session:

(1) Teachers will describe why consistency in teacher behavior is important with each student in the classroom.

(2) Teachers will conclude that the tests to be applied to a new rule before it is introduced include: is it definable, reasonable, and enforceable.

(3) Teachers will describe and offer solutions for teaching problems that include pupil confusion, inattention, distraction and fatigue.

(4) Teachers will list how the following elicit approach-avoidance behaviors in learning:
   a. teacher
   b. instructional materials and devices
   c. physical environment
   d. rules and policies
   e. social environment

(5) Teachers will list methods of producing change in existing social behavior.

(6) Teachers will discriminate between the following groups of terms:

a. integrative	b. dominative
democratic	authoritarian
inclusive	preclusive
student-centered	teacher-centered
indirect	direct

Treatment:

(1) Excerpts from an audio-tape on classroom management presented during the Summer 1967 Curriculum and Supervision 244-245 course will be played to generate a discussion among the teachers concerning positive and preventive discipline.

(2) Teachers will discuss "shaping" of behavior and the reinforcers available in the classroom to use in assisting them develop acceptable pupil behavior, e.g., verbal reinforcement and non-verbal reinforcement.

(3) Teachers will discuss the following questions:
  a. What rules of behavior are appropriate to our classes?
  b. How should a new rule be introduced?
  c. How should we extinguish irrelevant behavior?

(4) Teachers will discuss Galloway's non-verbal communication model and the needed congruity between verbal and non-verbal communication, as these affect consistency and understanding of student behaviors.

(5) Teachers will, in a cooperative activity, define the following terms and offer examples or illustrations:
  a. extinction
  b. positive reinforcement
  c. social imitation
  d. discrimination learning
  e. setting goals
  f. demonstrating desired behavior
  g. verbally prompting student to produce desired behaviors

Materials:

(1) Excerpts from an audio-tape on classroom management from Summer 1967 Curriculum and Supervision 244-245.

(2) Resources:
  When We Deal With Children - Redl
  Children Who Hate - Redl and Wineman
  Controls from Within - Redl and Wineman
  Model of Non-Verbal Communication - Galloway
  The Child in the Educative Process - Prescott
  The Characteristics of Frustration - Caldwell
  Pressures on Children - Frymier
  NEA What Research says to the Teacher Series--Personality Adjustment of Individual Children - Ojemann
  Summerhill - Neil
  Self Concept and Learning: Breaking the Vicious Cycle - Lewis
  Guide to Effective Teaching - Woodruff
  Entering Angel's World - Faust

Evaluation: Teachers will identify appropriate methods for changing an undesirable behavior and describe and demonstrate teacher behaviors involved in implementing the methods.

APPENDIX D

LETTER TO TEACHERS REQUESTING CHOICE OF COMPETENCIES

August 8, 1969

Dear Teachers,

When we met in July, we discussed working with five competencies in the group sessions. Because of the time element involved, I have decided that we will work with only four competencies.

Would you please indicate below which four of the five competencies you prefer to use in the sessions and return this letter to me in the enclosed envelope.

Thank you.

Sincerely,

Joe Hrivnak

***

___ Competency 1: Use permanent records and standardized or teacher-made-tests as tools to acquire information about each student's academic strengths and weaknesses.

___ Competency 2: Develop on-task pupil talk and help students verbalize their academic difficulties.

___ Competency 3: Use students' ideas and have students help in planning some group and individual activities.

___ Competency 4: Use a wide variety and different levels of academic materials.

___ Competency 5: Deal with each student's off-task behavior in relation to the individuality of that student.

APPENDIX E

HANDOUT

Innovative Inservice Education Program

Orientation Sheet

GROUP A	GROUP B
Meetings -- Building A	Meetings -- Building A
Teachers A, B, C, D, E	Teachers F, G, H, J

Group Sessions and Inventory Administrations

Inventory administrations (all classes) -- September 15, November 6, January 14.

Group A meetings -- September 17, 30, October 13, 28 (Beginning at 1:00 p.m.)

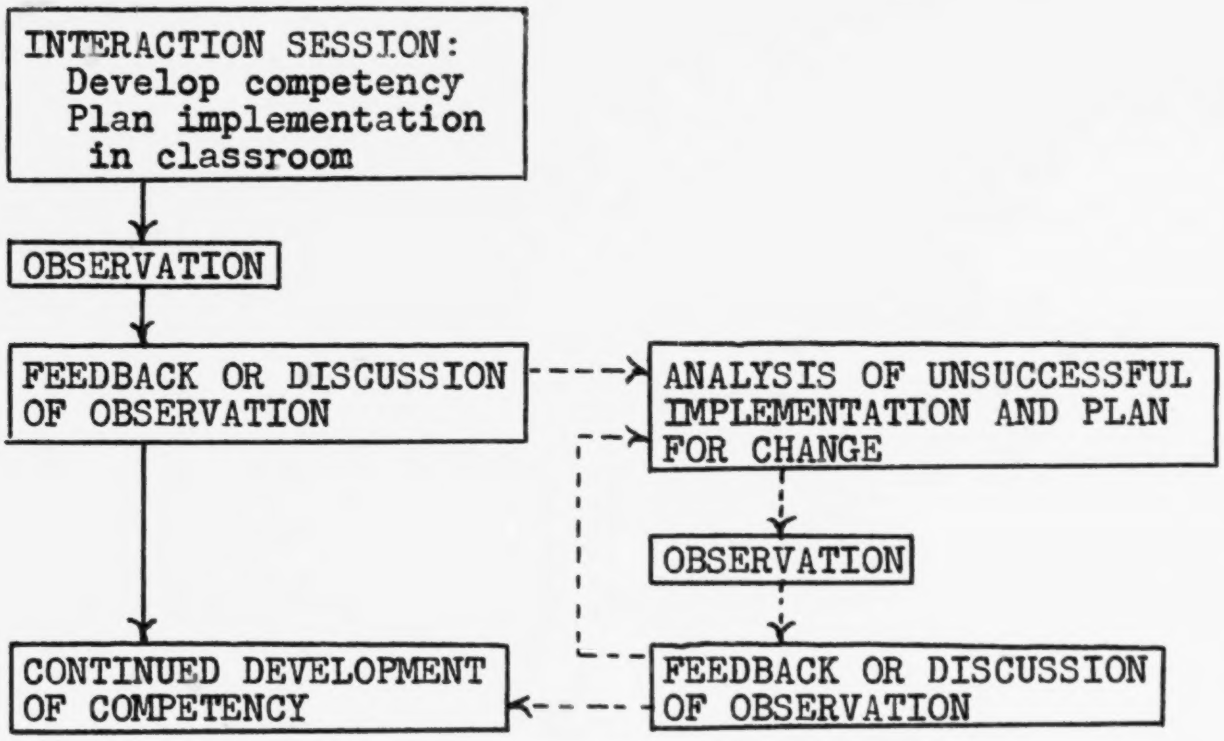
Group B meetings -- November 7, 20, December 9, January 6 (Beginning at 1:00 p.m.)

The four competencies that will be used in the group sessions were chosen by a majority decision. They are:

1. Develop on-task pupil talk and help students verbalize their academic difficulties.
2. Use students' ideas and have students help in planning some group and individual activities.
3. Use a wide variety and different levels of academic materials.
4. Deal with each student's off-task behavior in relation to the individuality of that student.

General Information

A portion of any session can be taken to discuss an item of relevance to the group--the planned interaction does not have to be followed in its entirety.


INTERACTION SESSION:
Develop competency
Plan implementation in classroom
OBSERVATION
FEEDBACK OR DISCUSSION OF OBSERVATION
ANALYSIS OF UNSUCCESSFUL IMPLEMENTATION AND PLAN FOR CHANGE
OBSERVATION
FEEDBACK OR DISCUSSION OF OBSERVATION
CONTINUED DEVELOPMENT OF COMPETENCY

The group sessions will be used to discuss and continue the development of each competency. The observation and feedback will assist each of you implement the competencies with your students.

APPENDIX F

INVENTORY

Flanders (1965) measured the students' perceptions of the direct or indirect influences used by their teachers as a criterion in his study of pupil attitudes and achievement. Some school systems are using anonymous ratings by students to help their teachers improve classroom climate. (School Management, 1968, pp. 92 and 95 and 1967, p. 15)

On the Inventory, the five choices for each item (always, almost always, sometimes, hardly ever, and never) were assigned a numerical value, assumed to be equally spaced on a continuum, and an interval scale was used. The numerical assignment is so structured that the higher the total score, the more the teacher is perceived by students as one who assists them become independent autonomous learners. The Inventory cannot measure directly and specifically the assistance to students, but it recorded their perceptions of the assistance they received.

The investigator designed the Inventory after a review of research tools, attitude inventories and competencies for Division One. The following criteria of selection were specified and applied: (1) the item must describe some portion of at least one of the competencies in Division One; (2) the items should be stated in simple terms so that young children can understand their meaning; and (3) the items should cause pupils to respond in terms of their personal experience.

The investigator conducted a pilot study of the Inventory during June, July, and August 1969. The study was conducted with students who participated in the summer playground program in the school district. This was a random group of six, seven, and eight-year-old children from each attendance area in the school system. They responded to the Inventory and offered their perceptions about the wording of the Inventory and the ideas presented in the sentences. After an informal evaluation of the childrens' perceptions, the wording of the items was modified, but the format remained the same.

The Inventory was administered by certified teachers selected by the investigator. The teacher was not in the room during the test and had no access to the instrument or pupil responses until after the completion of the study. Therefore, he was unable to change his classroom behavior on the basis of the students' responses. Many research studies have found a significant change in teacher behavior when feedback of pupil perceptions was given to the teachers. If teachers were informed of the results of the Inventory, this would become a variable to be considered along with the in-service education model as the reason for pupils changing their perceptions of classroom behavior on later administrations of the Inventory.

Students' perceptions are not subject to any bias not found in the total student population since students are assigned randomly to each room at the beginning of the school year. The randomization is limited by the geographic area and resident population in the area designated for each school.

The items were assigned as measures of each competency by content validation. (Kerlinger, 1967, p. 445) The investigator did not use the instrument to discriminate between the classroom behaviors of specific teachers, but did use the instrument to measure classroom behavior before and after the inservice education program. There was no ranking or rating of teachers using this instrument.

The items measuring each competency are as follows:

Competency 1: Develop on-task pupil talk and help students verbalize their academic difficulties.

Items:
5. The teacher lets us talk about things in class.
10. The teacher asks us questions when we do not understand our work.
13. When I do not understand my work the teacher helps me find out why.
16. The teacher makes sure that each of us gets a chance to talk.
18. I get a chance to tell my ideas about what we are learning.

Competency 2: Use student ideas and have students help in planning some group and individual activities.

Items:
4. The teacher lets me help pick what I should learn next.
7. The teacher lets me help pick different ways to do my work.
12. The teacher gives us a chance to show what we are good at.
14. The teacher uses ideas given by boys and girls.
15. The teacher likes to hear boys' and girls' ideas.

Competency 3: Use a wide variety and different levels of academic materials.

Items:
2. The teacher gives me books to read or look at that some boys and girls do not read or look at.
9. I can use many different things to help me learn.
11. I have many different things to work with in the classroom.
17. I like the things the teacher gives me to do.
20. The teacher wants me to read books that are too hard for me.

Competency 4: Deal with each student's off-task behavior in relation to the individuality of that student.

Items:
1. The teacher is fair with boys and girls who get in trouble.
3. I think the teacher picks on some boys and girls unfairly.
6. The teacher is fair with each boy and girl.
8. The teacher makes sure not to hurt your feelings.
19. The teacher punishes me for things I did not do.

The items measuring students' perceptions of Competency One are 5, 10, 13, 16, and 18. These are similar in content to items used by Seager at the secondary level. Items in Seager's inventory and the items in this Inventory are matched, and if Seager's items measure the same universe at the secondary level, then the Inventory items should measure the same universe at the elementary level. The Inventory items match with items in Seager's "Area VI--Teacher's Response to Pupils' Communicative Behavior." (Seager, 1965, p. 78) Seager's items are: "the teacher understands the pupils' difficulties and helps them see how to correct their mistakes, the teacher understands what pupils mean even when they find it difficult to put their thoughts into words, and when pupils want to ask questions or tell the teacher something they are encouraged to do so." (Seager, 1965, p. 78) Seager's items correlate at 0.35 or above and measure the same universe; therefore, the Inventory items should, at the elementary level, measure the same universe.

Items measuring students' perceptions of Competency Two are 4, 7, 12, 14, and 15. The students' perceptions of the teacher's acceptance and use of students' ideas are measured by Items 14 and 15. Items 4, 7, and 12 measure the students' perceptions of the teacher's involvement of them in planning for their learning activities.

Items measuring students' perceptions of Competency Three are 2, 9, 11, 17, and 20. Items 2, 9, and 11 measure the students' perceptions of the variety and levels of materials available for them to use. Items 17 and 20 measure the use, by the teacher, of a wide variety of materials to meet the individual needs of each student.

Items measuring students' perceptions of Competency Four are 1, 3, 6, 8, and 19. The items measure the students' perceptions of the individuality of each teacher's treatment of the off-task behaviors of students, whether or not the teacher does treat each child fairly.

There are no specific reliability coefficients (r tt) for each of the competencies because of the anonymous and five response organization of the Inventory. There is an interdependence between reliability and validity.

Kerlinger (1967 and Guilford (1954) state that reliability contributes to validity, the same conditions that influence reliability influence validity, and the more reliable a test is the more valid it is.

> Note carefully, however, that if any extraneous influence has been at work, if anything like experimental effects have operated, then no longer will the variance calculated from the obtained means be a good estimate of the population variance of means. If an experimental influence --or some influence other than chance--has been operative, the effect may be to increase the variance of the obtained means. In a sense, this is the purpose of experimental manipulation: to increase the variance between means, to make the means different from each other. This is the crux of the analysis of variance matter. If an experimental manipulation has been influential, then it should show up in differences between means above and beyond the differences that would arise by chance alone. (Kerlinger, 1967, p. 193)

An instrument must be measuring the universe desired (validity) and doing this consistently (reliability) for statistically significant differences to be obtained. On the Inventory used in this study, there were nine statistically significant differences in means attained. (Tables 1 and 2)

The standard error of the mean is a statistic that indicates how close the sample mean (attained) is to the true mean. Four times the SEm is the interval in which, with 95% accuracy, the true mean will fall. (Kerlinger, 1967, pp. 166-168) On Table Three, the standard error of the means on the Inventory for teachers (first grade) B, E, G, M are generally the largest. In Davidson's study the reliability coefficients were lowest for six-year-old

TABLE 3

STANDARD ERROR OF THE MEAN FOR MEANS ATTAINED ON INVENTORY

TEACHER	COMPETENCY			
	I	II	III	IV
A	.63	----	----	
	.54	.49	.57	
	.78	.83	.40	
B	.97	1.23		
	1.19	1.08		
	----	.59		
C				.85
				.77
				.78
D		.61		
		.78		
		.80		
E		.99		.83
		.81		.65
		----		.79
F		.82		.75
		.80		.82
		----		.72
G	----	3.16	.55	
	1.06	1.50	.99	
	1.13	1.23	.80	
H	.72			
	.60			
	.66			
J		----	.62	----
		.73	.55	.82
		.67	----	.57
K	----	.75	.46	.59
	.57	.68	.50	.95
	.78	.65	.80	1.16

TABLE 3 Continued

TEACHER	COMPETENCY			
	I	II	III	IV
L		.43 .69 ----		---- .99 .68
M	1.71 .88 .91	1.05 .95 ----	.52 .70 ----	
N		.53 .71 ----	---- .67 .67	
O		.62 .69 ----		

SEm for September -- first position
SEm for November -- second position
SEm for January -- third position

children and highest for eight-year old children on an instrument similar in format and administration. The correlations were approximately .25 for the six-year olds and .40 for eight-year olds with the general trend being for the greatest reliability in the eight-year old group. (Davidson, 1968, p. 74) In this study (Table 3), the smallest standard error of the means are for teachers A, C, H, K, L who are third grade teachers. The standard scores obtained for the differences in means (Tables 1 and 2) should be interpreted in relation to the size of the SEm.

This is not a test because there are no right or wrong answers. How you mark each sentence depends upon how you feel. All the sentences refer to YOUR TEACHER and YOUR CLASS. No one in your school will see your answers. By giving honest, true answers you can help us understand how boys and girls feel.

DIRECTIONS: 1. You will hear each sentence read twice. You can read the sentence as you listen to it, then answer carefully but quickly. Do not spend too much time. Mark the word that comes to your mind first.

2. You are to put a line under the word that best tells how you feel about the sentence that has been read.

EXAMPLE 1:

Recess is fun.

ALWAYS	ALMOST ALWAYS	SOMETIMES	HARDLY EVER	NEVER

If you always feel recess is fun, you put a line under always. If you sometimes feel recess is fun, you put a line under sometimes. If you never feel recess is fun, you put a line under never.

For each of the sentences you are to put a line under one word only. The word that best tells how you feel about the sentence.

EXAMPLE 2:

Girls talk more than boys.

ALWAYS	ALMOST ALWAYS	SOMETIMES	HARDLY EVER	NEVER

Put a line under the word that tells best how you feel about the sentence girls talk more than boys.

Any questions?

1. The teacher is fair with boys and girls who get in trouble.

   ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

2. The teacher gives me books to read or look at that some boys and girls do not read or look at.

   ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

3. I think the teacher picks on some boys and girls unfairly.

   ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

4. The teacher lets me help pick what I should learn next.

   ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

5. The teacher lets us talk about things in class.

   ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

6. The teacher is fair with each boy and girl.

   ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

7. The teacher lets me help pick different ways to do my work.

   ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

8. The teacher makes sure not to hurt your feelings.

   ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

9. I can use many different things to help me learn.

   ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

10. The teacher asks us questions when we do not understand our work.

    ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

11. I have many different things to work with in the classroom.

    ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

12. The teacher gives us a chance to show what we are good at.

    ALWAYS　ALMOST ALWAYS　SOMETIMES　HARDLY EVER　NEVER

13. When I do not understand my work the teacher helps me find out why.
ALMOST HARDLY
ALWAYS ALWAYS SOMETIMES EVER NEVER

14. The teacher uses ideas given by boys and girls.
ALMOST HARDLY
ALWAYS ALWAYS SOMETIMES EVER NEVER

15. The teacher likes to hear boys' and girls' ideas.
ALMOST HARDLY
ALWAYS ALWAYS SOMETIMES EVER NEVER

16. The teacher makes sure that each of us gets a chance to talk.
ALMOST HARDLY
ALWAYS ALWAYS SOMETIMES EVER NEVER

17. I like the things the teacher gives me to do.
ALMOST HARDLY
ALWAYS ALWAYS SOMETIMES EVER NEVER

18. I get a chance to tell my ideas about what we are learning.
ALMOST HARDLY
ALWAYS ALWAYS SOMETIMES EVER NEVER

19. The teacher punishes me for things I did not do.
ALMOST HARDLY
ALWAYS ALWAYS SOMETIMES EVER NEVER

20. The teacher wants me to read books that are too hard for me.
ALMOST HARDLY
ALWAYS ALWAYS SOMETIMES EVER NEVER

APPENDIX G

EVALUATIVE CONFERENCE QUESTIONS

To stimulate response, each teacher was asked, "What have you to say about the inservice education program you have just completed?" If further guidance was needed to insure that each teacher would evaluate the program totally and cover a common ground of likes, dislikes, recommendations for change and specific usefulness of the program, the following questions were used:

1. Would you volunteer to participate again?
2. Will you use or continue to use ideas or suggestions presented?
3. Should there have been a more formal structure to the group sessions?
4. What changes would you suggest for each group session?
5. What suggestions do you have for the presentation of the topic discussed in each group session?
6. What did you find most useful about the group sessions?
7. Did the individual conferences follow the topics of the group sessions and successfully tie together each group session with the individual work for that session?
8. How could the individual conferences have been more useful to you?
9. Should there have been more individual conferences for each competency?
10. Was the feedback given to you useful or did it alienate you in any way as you continued the development of the competencies?

11. How could I have been more useful to you during the program?

The evaluative conference was audio-taped to insure exact replication of teacher comments.

APPENDIX H

COMMENT SHEET

Model of Inservice Education

☐ Comment

☐ Recommendation for Change

Name ____________________

Date ____________________

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